STATE OF CALIFORNIA

ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

CALIFORNIA ENERGY COMMISSION

RENEWABLES PROGRAM COMMITTEE WORKSHOP

(96-REN-1890)

Monday

November 4, 1996

10:00 A.M.

1516 Ninth Street
Sacramento, California
Hearing Room A

REPORTED BY: **A. FLYNN**

COMMISSIONERS PRESENT

MICHAL C. MOORE, Presiding

JANANNE SHARPLESS

STAFF PRESENT
(Alphabetically Listed)

Manuel Alvarez

Jonathan Blees

Susan Gefter

Carrie Hilton

Bob Huffaker

Marwan Masri

Vince Schwent

Rosella Shapiro

ALSO PRESENT
(Alphabetically Listed)

Donald Aitken, Union of Concerned Scientists

Bud Beebe, Sacramento Municipal Utility District

Rich Ferguson, Center for Energy Efficiency

Ranji George, South Coast Air Quality Management District

John Grattan, Grattan, Gersick, Karp, Miller

Tom Hinrichs, Geothermal Energy Association

Bob Judd, California Biomass Energy Alliance

Steven Kelly, Independent Energy Producers

Dan Kirshner, Environmental Defense Fund

Chet Krage, Thermo Ecotek Corporation

Eric Miller, Foresight Energy Corporation

Jay Morse, California Public Utilities Commission

Les Nelson, Solar Energy Industries Association

Donald Osborn, Sacramento Municipal Utility District

Nancy Rader, American Wind Energy Association

Kirpal Singh, Independent Consultant

Michael Theroux, Sierra Economic Development District

John White, Center for Energy Efficiency Renewable Technologies

Tom Williams, National Renewable Energy Laboratory

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P R O C E E D I N G

PRESIDING COMMISSIONER MOORE: Good morning. My name is Michal Moore. I'm a Commissioner with the Energy Commission here. I'm joined by my colleague Jan Sharpless. And we will be conducting a two-day workshop on renewables policy.

You've all had a chance to see the Hearing Notice that we set out, and there are copies of the agenda available from the Public Advisor in the back.

I want to welcome you to these workshops which we intend to be pretty informal. It's our chance to come up to speed and understand the current state of the art and thinking on renewable policy following the passage and now the implementation, the eventual implementation, of AB 1890.

I want to offer a few opening remarks and turn to my colleague for her remarks and then open the hearing up.

AB 1890 set out a new public policy foundation for the electric industry. Legislative intent was to transition to a more competitive market and simultaneously preserve California's commitment to developing diverse and environmentally sensitive electricity resources, which we feel is appropriate, as did they, given the public policy that was embedded in that and in the idea

of making a more diverse and cheaper electric resource available to the general public.

The commitment to continuing support for renewable resources is coupled with our desire to allow the citizens and businesses of the state to achieve the benefits of industry restructuring and to provide low cost and reliable electric services in a competitive electric market.

In consideration of the advice the Renewable Program Committee, which is Ms. Sharpless and myself, must formulate there are a number of principles considered critical to the preparation of our report which will be submitted to the legislature. We hope that you'll keep these principles in mind because they're going to guide us not only in our deliberations and our questions, but, frankly, in the composition and structure of the report that we submit.

First, recommendation should be consistent with AB 1890. We're not going to rewrite the legislation. We don't have the power to do it even if we wanted to, and, frankly, we don't have the time to consider massive revisions that the Legislature didn't just happen to think of.

We don't intend to consider amendments to AB 1890 unless

someone comes to us and points out some sort of fatal flaw that would be involved in the implementation of the bill as written. In that case, we'll take that advice very very seriously, take the recommendations back to our colleagues and consider whether or not to request legislative amendments in the future.

Our goal is to prepare a set of recommendations to the Legislature that will support the renewable industry in the long term without the need for continuing public assistance and yet allow the renewable industry a reasonable expectation to compete in the new market structure.

Our goal here is to arrive four years hence with a viable and very competitive industry. And we don't have a picture at this point of continued subsidies, no instructions on any subsidies that might be available through the public sector beyond four years from now.

Third, proposals and any consensus that is offered to us must reflect the public interest. Recommendations must have supporting rationale and analysis and not merely offer any agreements without justification for them.

And, by the way, on consensus, while we are going to seek this out, advocate it, as strongly as possible, the fact that

a consensus is arrived at in any given area does not mean in the end that when setting priorities and trying to pick and choose between competing interests the Committee will always accept a consensus point of view that is offered in the final analysis.

Finally, time is of the essence. We don't have very much of it, and I'll be going over our schedule here in just a moment, so we won't be able to plow any new ground on this.

Where a consensus exists with some supporting rationale and is consistent with the public interest, we feel it should be utilized, and we intend to do that.

So a couple of words on the process. As I indicated, this is intended to be a fairly informal set of workshops. We will hold two workshops, today and tomorrow. There will be another set of workshops that are noticed and may be taken advantage of by the Committee later in the month of November. We will intend to have formal hearings with filings in the month of December.

Our objective is to comply with the October 16th En Banc Hearing. And let me just read the couple of sentences that were in that that pertain to this for your reference.

"The assigned Committee shall schedule public

conferences, workshops and hearings as needed in various locations in the state to ensure maximum public participation. The Committee assigned to the renewables report shall prepare a draft report in December 1996 for En Banc consideration by the Commission in January 1997. Following further direction from the Commission, a draft final report shall be prepared in February of 1997 for adoption by March 31, 1997."

We intend to meet those deadlines. That means that we will be producing some type of draft for consideration in February. Which tells you that if there is a consensus that will be arrived at in any given area, it's likely to be most effective and have the most impact if it emerges prior to our public hearings in December.

Let me tell you that there are various ways to reach us and reach the docket where there's an instruction sheet in the back to tell you how to file. And Carrie Hilton, who is acting as staff for us in the front, will be available to take documents and file them for us with the Docket.

Our Staff is represented by Marwan Masri who is in the front and who will be the principal contact point for the Committee besides our advisors. And, of course, you're free to

contact them as you need.

We have a very aggressive schedule to meet today, and I'm unclear until I know how many people actually want to speak versus those who are here to observe and take comments how I may have to structure the timing of any given set of remarks. So I hope you'll bear with me and understand that we're trying to focus a tremendous amount in a very short period of time.

We don't need a lot of history where it is simply adding color to the testimony, and we certainly appreciate it if someone has testified ahead of you on a certain point if you don't repeat it but simply underline the fact that you're in support or in opposition to the testimony that went before and the reasons for that.

Again, we'll try and adjust accordingly once we see how the testimony is going, but in general might I ask that you limit your remarks to in the neighborhood of about five minutes because we've got a number of items to revisit.

If you need considerably more time than that, let me know at the start, and we'll talk it over, find out whether or not we're going to be able to accommodate lengthy oral as opposed to written testimony.

Finally, let me tell you that in introducing each topic, what I'm going to do is to turn to Staff and ask them for a few words, very few, that will introduce the nature of the topic that we're going to be discussing at that point. And I'm going to ask then if there's anyone who represents a consensus interest that is emerging or has formed on that topic to come forward first and to give us some information about the nature of the consensus that's been arrived at and the support you have for the consensus opinion.

Now, blue cards are available from the Public Advisor, and I should introduce Susan Gefter, our Public Advisor, who is here, and her job, quite literally, is to act as a liaison for the Commission and the public at large. If you have questions, if you don't feel you're getting through to us, Susan is our ombudsman and representative, and she'll make sure that somehow a solution gets arrived at.

Right now Susan is helping us to make sure that everyone who wants to speak fills out a blue card. Now I know that I got some blue cards before everyone had a chance to hear all the instructions. Basically it is this: If you intend to speak on more than one topic that is for today's hearing, today's workshop,

excuse me, would you list them in order so that I know that you'll be appearing more than once, and I'll adjust the card file accordingly to know to call on you a second time or third time should you wish to speak on any given topic.

So with that, I welcome you again. I turn to my colleague Jan Sharpless and ask for her comments.

COMMISSIONER SHARPLESS: Thank you, Michal.

I think that Commissioner Moore has pretty much covered the ground that needs to be covered today. I would just add that I know that there has been a great deal of work that has gone on before this Committee, and we have before us large volumes of paper that we have attempted to go through to prepare for this effort. But there's a great deal more to do, and I know that the Committee looks forward to working with each and every group that will have very valid ideas to present to us.

We are trying to balance all of the interest. We are trying to carry out the legislative mandate. We are trying to do this in the time allocated to us. I think that this is going to require a great deal of openness and collaboration between the parties, and we look forward to helping this process by continuing to respond to those ideas with the principles that we see have

been set out before us.

So today is the start. I think we should just get going on it. And hopefully by the next couple of months we'll have a better idea of how close we are in meeting the mark. So I'd like to turn it back and get started to the process.

Thank you, Commissioner Moore.

PRESIDING COMMISSIONER MOORE: Thank you, Commissioner Sharpless.

And with that, we'll open the workshops, and I'll tell you that we're going to entertain comments on the process that we're undertaking. You understand the necessarily compressed time frame that we are facing and the necessity to get a draft report out to our colleagues in the middle of January and revise it and then go on for a report back to the Legislature in March. And both Commissioner Sharpless and I will be there in front of the Legislature to present this as well as some detail about the process that we undertook.

So with that in mind, the very first two items really kind of set the stage for the rest of the workshops so, in a sense, they're more general than anything else that we go through.

Let me just start with the process itself, and, again, I

haven't gotten cards back that were definitive in terms of wanting to speak on the process, but two of them, as a start, seem to look like they're appropriate. And so let me start with Steven Kelly, Policy Director for IEP, if I'm not mistaken.

And let me just ask, if I can, the, excuse me, I've already abrogated my own process. I need to turn, Steven, I'll come right back to you, I need to turn to Marwan because I indicated I would ask for some opening Staff comments on this.

And, by the way, when I come back to the public, would you please, just for our own record, speak clearly, slowly, into the microphone. And if you have a last name that's going to be difficult to reproduce in print, please spell it out for us and tell us what organization that you are with or to hand our scribe one of your business cards.

Marwan, let me turn to you with apologies.

MR. MASRI: Thank you, Commissioner. I don't really have much to say about this since you covered it very well.

I would just say that as far as the scope goes between the October 16 Hearing Notice and the notice for this workshop, there are a set of issues that pretty much define what the scope of the report is going to be. And the parties had an opportunity

on the 16th to add any issues that were not covered then. So to the extent possible, I think it will be a good idea to work within the issues that are here unless there are others that are important ones that you feel we should be considering.

So I think that's all.

PRESIDING COMMISSIONER MOORE: Good point. And I should reiterate if you think that we've missed something in our grab bag of issues, we've made a provision at the very end for what we're calling "other issues." Not very original, but designed to allow us a catchment, if you will, for things that we might have overlooked or failed to go into in enough depth, and we'll ask you to observe that caveat and give us testimony at the end of the hearings or the end of the workshops and tell us if you think there are items that you think we have missed.

COMMISSIONER SHARPLESS: Commissioner Moore, can I just add.

PRESIDING COMMISSIONER MOORE: Of course.

COMMISSIONER SHARPLESS: And I don't know if Mr. Kelly is going to address this issue, but it seems to me in reading some of the earlier comments that there's an issue that was brought up by several of the stakeholders indicating items that could move

before the issuance of a report. Those that may extend beyond the report. There seems to be some timing issues.

And so for those who made those points, I think certification was one of them, that certification could occur before the report, I don't know if that's correct, but it seems to fall under the process and scope question.

PRESIDING COMMISSIONER MOORE: Thank you.

Mr. Kelly.

MR. KELLY: Steven Kelly with the Independent Energy Producers, Service Policy Director. Commissioners, I briefly want to discuss just some principles for implementing the renewable component of AB 1890.

As you know, IEP represents a broad spectrum of renewable energy producers in California, including biomass, geothermal, wind and solar resource providers, and we welcome the Energy Commission's role in implementing the intent and language of AB 1890.

I have about five principles that I just wanted to bring to your attention, some of which are mere the principles that you outlined yourself, Commissioner.

One principle that we will hope the Commission will

consider is the efficient and effectiveness in meeting the intent of AB 1890. As you well know, that bill reflects an extensive legislative process characterized by broad discussion, negotiation and compromise. In the end, the process brought together very disparate parties with a common interest and a common vision, and we would hope that that vision ought to be maintained during the Commission's endeavors as we move forward over the next four or five months in implementing the provisions of that bill.

Secondly, I would urge the Commission to consider as an important principle simplicity. Market participants, both renewable providers and renewable customers, must have a clear and full understanding of the market. And this understanding can best be achieved if the market institutions and the funding mechanisms are readily known and easily understood by all market participants.

Thus, from our perspective, the funding allocation mechanisms and institutions must be simple, such that their design and development can be achieved so as to serve the market no later than January 1, 1998.

Third, I urge the Commission to consider the sustainable issues that the Commissioner brought up previously, and

particularly how best to leverage the principles embodied in AB 1890 as well as the funding levels to maximize the potential for long-term viability of the renewable industry and the energy markets in California.

Fourth, it's important for the Commission, as we move forward, to be cognizant of that we need a comprehensive yet flexible program. They must recognize that no two renewable technology sectors are the same and no two renewable energy providers, either existing or new, have the same operational or financial characteristics. Thus, no one-size will fit all in this case.

The Commission ought to consider policies, institutions and programs which maximize the flexibility of each renewable technology to position itself for the rigors of full competition after the transition period in the year 2002.

And finally I urge the Commission to consider non-intrusive mechanisms and solutions in this process. AB 1890 reflects a recognition and interest among a broad range of California stakeholders in assisting the renewable industry as it transitions itself to a competitive market. We're all fostering market structure mechanisms to allocate available funds based on

market principles.

The Commission must endeavor to recommend mechanisms and solutions which are non-obtrusive as possible so as to ensure implementation of the market mechanisms no later than January 1, 1998.

We urge the Commission to consider these principles as we move forward, and we think they provide the requisite direction and flexibility to allow us to achieve the compromises and consensus building that is ongoing as we speak and shows a great deal of promise of bearing fruit in the near term here.

And those are my comments.

PRESIDING COMMISSIONER MOORE: Thank you, Mr. Kelly.

Questions? Jan?

COMMISSIONER SHARPLESS: Yes.

On your first one, the common vision. You say that that is explicitly stated in the AB 1890. Are those the two principles that one is that the programs be directed at the consumer?

MR. KELLY: There's a couple principles in AB 1890 that would characterize that common vision, some of which are stated and actually some of which are unstated; but the customer orientation, market based mechanisms, are principles that the

parties in that process have agreed upon, and we view that as underpinnings as we move forward.

COMMISSIONER SHARPLESS: What are the unstated ones?

MR. KELLY: In the negotiations and discussions that resulted in the language of AB 1890, there were a variety of interested parties endeavored to accomplish the language that you see before you. Sometimes that language may state a principle or convey a thought that is reflective of a greater negotiation that went on during that period.

And while I couldn't collapse that into a single statement or anything, there is a sense, I think, amongst the parties that were involved in the negotiations that the renewable industry and its relationship to the future market need to be sustainable, need to be supported during the transition period, and that includes both existing and new resources.

COMMISSIONER SHARPLESS: Okay. And your five principles are the five principles that have been embraced by all of those who are in this room?

MR. KELLY: I don't believe so since I just circulated them this morning. But I would hope that they would be useful as guiding tools for the Commission as we move forward.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER MOORE: Certainly having them on the floor gives everyone an idea where IEP's coming from and pretty much lays the groundwork. Thank you.

Let me add one other item that I was negligent in listing before, and that is that in terms of formal filings, as I pointed out these workshops are intended to be informal, therefore we have not asked for formal filings. We will intend to ask for formal filings at the hearings that will be conducted in December. However, if you have written comments today, we would appreciate it if you would give them to the scribe for filing or to Carrie. And they must be filed with the Dockets Unit which is the address that's on the front table. We also have electronic filing, and it's available at our Web site.

And I should point out that at the end of today the written comments that we can transcribe and get up will be posted up to the Web site and be available. So as fast as we can put them up mechanically speaking, they'll be up and available electronically for download.

Thank you. I didn't have anyone else on the blue card list who specifically said that they wanted to talk about purpose

or procedures. Is there anyone else here who would like to address us on that topic before we turn to the topic of definitions?

Please come forward, and we'd like to hear from you.

MR. BEEBE: Hi, I'm Bud Beebe with the Sacramento Municipal Utility District.

Your process here involves of necessity the public goods programs that are directed at the investor owned utilities. As a municipal utility, we are actively following this process because you guys are the dog and we're the tail a lot of times. But we're an important part of that tail, and we're very interested in assuring that this process works smoothly.

I would say that as you go forward, remember that municipals have been consistent in furthering the renewables and RD&D for renewables processes, and we think that we need to be a part of any continuing programs.

We know from our experience that there is a great need for allowing collaborative efforts to occur. So as your process evolves, assure that you can share monies with municipals, assure that you can share monies with the Department of Energy, particularly the renewable energy production incentive which may

be very important to the financial security of some of these emerging renewables. And I guess that's what we need to say about that.

Secondly, there's a need to balance both short and long-term needs as these programs go forward. As we move down the road I think we need to be sure that this process does not exacerbate the hiatus which currently characterizes the deployment of renewables in California. We need to get on with the program.

We do need balance between what we're going to do in the future and what we're doing now, but if I had to choose, I would choose for allowing programs to go forward now. We're not very good at deciding which kinds of technologies will ultimately win in the economic marketplaces, but we do know the kinds of technologies that further the important things that a generation technology needs to do in California, which is to be a sustainable renewable characteristic to further the air quality and other environmental benefits. And we know that there are technologies available to do that today, and we need to get those going.

Regardless of where we think the market is eventually going to pull those things, let's allow those long-term benefits to work themselves out in a long-term situation.

Again, just wrapping up quickly, the municipals will be following this, we're interested in collaboration and seeing how our programs can work effectively with the IOU programs as you go forward. Thank you.

PRESIDING COMMISSIONER MOORE: Thank you, Mr. Beebe. It's not always easy to know where the municipal interests lie because we don't have, if you will, a direct line into the municipal utilities. And we absolutely encourage your participation not only here but in the former WEPEX process and hope that a collaborative effort can be developed.

And hopefully we'll have your consistent interaction through this process up to and including a valid and constructive critique of the draft documents that we put out. Because we want to have that point of view embedded in what we develop.

MR. BEEBE: We'll try to do that.

PRESIDING COMMISSIONER MOORE: Good. Thank you.

Other questions for Mr. Beebe?

Thank you, sir.

Anyone else who'd like to speak to us on process and procedures?

MR. WHITE: Mr. Chairman, Commissioner Sharpless, my

name is John White. I'm the Director of the Center for Energy Efficiency Renewable Technologies.

I wanted to just convey to the Committee the importance of some linkage being established between some ongoing activities and other venues that are related to the ultimate success and goals of this proceeding, and that has to do with the area of customer information.

And in particular, there's two aspects. One is a deficiency in the restructuring process so far, is the lack of clear commitment or guidance as to how customers, who ultimately are going to have a great deal of say potentially about the mix of electricity sources, getting any information whatsoever about the environmental attributes or impacts of their electricity choices.

There are no provisions for disclosure or labeling within the utility marketplace so far. There is a great deal and concern and interest, of course, at certifying renewable providers. This is an area we're spending some time on and hope to provide the Committee with some of the fruits of our efforts with respect to certifying renewables.

But I think there is a larger question that is lacking so far in the vision that has emerged. And that is the need for

all customers to be given basic information about the environmental impacts and consequences of their electricity choices. And I don't think this is for renewable customers alone.

This is something that I think we can develop over time. I think that the yet to be resolved CEQA issue, which I believe is an issue that's going to have to be resolved in some fashion, will provide an opportunity. I think this Commission's data gathering and monitoring capabilities may turn out to be important in this regard.

So I just wanted to highlight the need to look at the availability and potential to make available to consumers environmental information be something that this Committee at least put on its list of items to be watching.

Secondly, I think that we have an opportunity to influence the Public Utilities Commission with respect to its decisions on allocating funds for consumer education. One of the fundamental principles of markets is the customers need information to make choices. I believe the PUC is going to earmark some funds for customer information and transfer of knowledge to customers about what's coming about.

You know, we all that have been working on this for a

couple of years have a great deal of interest, but the vast majority of the public is not aware at all of what's coming down with the opportunity for choice. And I think potentially the PUC could be persuaded to allocate a portion of its consumer education funds for the purpose of informing customers about their potential choices with respect to renewables.

And there have been some proposals to earmark some of the funds in 1890 for renewables for that purpose. I think before we do that we ought to at least be sure that the PUC's allocation process for customer information reflects the need to inform people about this.

So those are just two suggestions I wanted to add.

PRESIDING COMMISSIONER MOORE: Thank you. Two very good points. And let me just respond to those.

But first of all, let me ask if there is a Claud Poncelet from PG&E in the audience. You should see our Public Advisor for an important phone call.

Two very important points. And let me simply say that we're trying to open up relationships with the PUC Commissioners that have historically not been perhaps as open as they could be. And I believe that you'll find that this Committee is going to

work very closely with the presiding and second member of the PUC Commissioners who are interested and pointed in the same direction.

So I think you're going to hopefully see that, you will obviously remind me if I fail at this at the end, but we're hoping for some unprecedented cooperation and joint activity in the future. I have every confidence that it will come to that.

Second, I've added your item on consumer information which I think is a stellar point as number nine on the second day. Seems to me this whole question of how green information and choice gets out is clearly something that we will, at the very least, want to comment on in our report to the Legislature in March. So thank you for that, and I've added that.

Anyone else who wishes to talk to us about process and procedure?

All right. With that, we're going to move on. We're going to take up definitions. And what I'm going to do is to ask Marwan to highlight the four basic definitions that we're working with today, and we'll kind of set the stage for you. Give you an idea what Staff has been thinking and what has been at least talked about at the Commission level between Commissioners as far

as basic thoughts on key definitions.

So if you'll use these as again the stepping stone to open this topic up, we'll then open the discussion for your comments.

Marwan.

MR. MASRI: Thank you.

Yes, these are really meant to start the discussion, and I just should say that I present the current thinking Staff has. By no means they are final or fixed. So we encourage input on these.

The first definition is renewable resource technology. And if you notice, this really comes almost right out of the bill exactly where renewable resource technology means that technology or generating facility which employs a technology to produce electricity from other than a conventional power source as defined in Section 2805. And then there is the exemption of 25 percent fossil, up to 25 percent fossil is allowed.

You look at Section 2805 you'll also notice that a conventional power includes hydro generation 30 megawatts or larger. And so by implication hydro less than 30 megawatts is renewable.

So there are two, I think, main issues here is the fossil limitation of 25 percent and the size on hydro. Ought to be good to get and put on.

The second definition, of course, is an existing. What's existing renewable resource technology? And a proposal is to have date of January 1, 1998, any renewable resource technology as defined previously or ultimately that was in operation and selling electricity prior to January 1, '98, be an existing resource technology.

For new, similarly, we would propose that if a facility was constructed and installed prior to, after January 1, 1998, or an existing renewable resource technology which has been substantially refurbished or substantial portions of which have been replaced with new equipment and materials and which was returned to service after January 1, 1998.

Emerging renewable resource technologies means photovoltaics and other renewable resource technologies as periodically designated by the California Energy Commission or its successor which have been determined by the CEC to have reached the status of an early stage of commercial readiness.

Now, definitions, of course, go beyond these four

definitions we just mentioned. We just put these up to start the discussion. There are many other terms that the parties may want to point out that need to be defined and propose definitions on those as well. Not just be limited to these four that we just discussed.

PRESIDING COMMISSIONER MOORE: And you'll recognize by the word "successor" that we were dealing with our lawyers before we put this up, and that we were compelled to put on all the legal language. We have no intent of going out of business. At least in the time period between now and our submittal to the Legislature.

Let me open this up with the first card that I've gotten which identified definitions as something to talk about. Michael Theroux, consultant. Mr. Theroux, welcome.

MR. THEROUX: Good morning. I represent -- Michael Theroux, by the way, Theroux Environmental Consulting. I represent the Sierra Economic Development District.

I would like to offer to the public and the Committee the recently completed Phase I and Phase II Biomass Study Reports which the district now has available. Our emphasis has been on the development and testing of an economic model from the

extraction of the resource to the end market, including, of course, the energy market.

I would like to suggest that the Commission has these tools now available. In particular, this is an issue of cross-over to the CAL EPA's most recent 3345 Bustamante Bill [phonetic] and the utilization of biomass. So given the implementation of AB 1890, the new work that Sierra Economic Development District has for you can provide a perspective on an economic model which may be useful in your allocation of funds and in defining the market sectors, process or sectors, transport sectors, regulatory sectors that are involved in this process.

PRESIDING COMMISSIONER MOORE: You want to describe just briefly how the model works for our edification and then how your comments on the model might be used by us?

MR. THEROUX: Surely. The district's purview is a four-county area. The requests from the grantors, who in this case the Forest Service, state and private forestry, Ford Foundation in the ADA has been to assess the full range of economic impact of the depletion of the white chip market toward the biomass energy facilities and how that has impacted the removal of biomass from the forest.

Our economic assessment has taken in the process of extraction of the resource, the biomass resource, particularly in the Tahoe Basin, the region around it, extends all the way up into Shasta and down into Amador Counties out into Nevada as well.

The first step, of course, is the release of the resource from the forests, the in-place biomass as waste, biomass as fuel loading fire hazard. The second step is the transport extraction of that material from the forest and the transport to a series of processors.

And we have gone through first step Phase I Report, which identified by definition the terms of renewable biomass that we find in the forest, and the agencies that are there, the volumes that we have working with the forest products, laboratories. The locations vary. We might suggest as high priority resource that need to be extracted due to fuel loading questions.

The second phase report just completed, the draft is being bound as we speak, takes the issue of the economics specifically. Who are the processors, who are the regulators, who are those companies that locally around the Tahoe Basin from Shasta down transport materials, what is the flux between the

timber, energy and waste management industries, how does the small logger fit into the picture, and what are the specific impacts upon our local industries and individuals that are impacted by this change in the deregulation and restructuring process.

PRESIDING COMMISSIONER MOORE: Great. And you'll make sure that we get a copy of that second phase report?

MR. THEROUX: You surely will.

PRESIDING COMMISSIONER MOORE: Thank you. We'll be in your debt.

Questions?

COMMISSIONER SHARPLESS: Yes, I have just one.

I think what you've been describing is the way to effectively analyze the sustainability of the biomass industry that's dependent on forest waste?

MR. THEROUX: Correct.

COMMISSIONER SHARPLESS: Okay.

MR. THEROUX: There are many different pieces, of course, that are intertangled, and we've taken on the task over the last roughly two years to pick apart that structure, that economic flow chart, that model, and try to place faces to that.

We have perhaps 60 or 70 pages of annotated contact

lists for examples. Not exhaustive, but we've tried to be very careful and find representatives and interview them personally of all of the folks that we can get in contact with in this region, from resource in place to extraction to transport to processing to post-processing transport and to end market and to define where our intermediary markets and our end market users are.

COMMISSIONER SHARPLESS: Would you say that your work is geographically specific?

MR. THEROUX: From, yes, it is. Centered on the Tahoe Basin because we feel the Tahoe Basin, first of all, is in our purview as a federally designated economic development district.

Secondly, because the Tahoe Basin is such a centerpiece in forests in the United States, and in California in particular can be used as an educational mechanism for demonstration projects to draw the public attention to the actual breadth of the questions that we're discussing.

COMMISSIONER SHARPLESS: Did you have any specific comments on the definitions that Staff laid out. I realize that this is fresh and new, but.

MR. THEROUX: Yes, only that from the perspective that we've approached we found that in many cases there's almost a

necessary partisanship between the various industries, and we have tried to bridge that.

So that the definitions that we've looked at within biomass have gone beyond extended those of either waste management or the timber industry or the energy industry and tried to find some common ground to, within the regulations, within the public's understanding as well, as to what is this creature of biomass. First as waste, second as fuel loading, perhaps third as fuel for the industry, for the energy industry.

COMMISSIONER SHARPLESS: Well, what advice, then, are you giving us with regard to definitions?

MR. THEROUX: Be careful that this is not specific to the energy industry only when the impacts of the definitions that you have are upon the economic structure of the entire renewable industry from their extraction all the way through to the end market.

We found it's consistent, it's unavoidable, I think to a large degree, that in each set of regulations the definitions are very very disparate. That one set of definitions conflicts with the other. Particularly between the waste management industry, the energy industry and the regulations monitoring and controlling

the forest release of the products of the renewable materials themselves.

COMMISSIONER SHARPLESS: Would this comment be mainly directed at existing renewable versus new and emerging?

MR. THEROUX: Yes. Yes, clearly. We're mostly focused on trying to work with the existing structure itself. If there are missing pieces, yes; but first take the industries that we find in place and the regulations that sit upon them and try to work with that base first.

COMMISSIONER SHARPLESS: You don't see your industry advancing to the emerging renewable technology or even the definition of new renewable resource technology?

MR. THEROUX: We find that there are gaps in the regional structure that are clearly to be filled with emerging technologies, yes. Fiber composites in particular, ethanol, of course. Our emphasis has initially by edict, if you will, from the direction of an economic development district try to assist those community members and industries that are in place, and, therefore, first not to bump those that are functioning now. Try to build those that are there now.

So we do tend to lean more strongly toward existing than

we do secondarily to finding if there are missing keys that need to be put into place.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER MOORE: Thank you, sir. We appreciate your interest, and we'll look forward to seeing your report.

Dr. Donald Aitken.

DR. AITKEN: I'm Donald Aitken. I'm a Senior Scientist with the Union of Concerned Scientists. I would just like to address the issue of the hard and fast limit of the 25 percent limit on fossil fuel contribution to renewable if you have the legal authority to address that.

That economic analysis shows considerable benefit in blending renewables with non-renewables, both from the economic standpoint, whereby you reduce the marginal cost contribution of the renewables such as the whole project itself may be more accessible to market forces or market opportunities, and secondly from the functional standpoint also where you can absolutely maximize the benefit of the renewables.

The 25 percent limit has sort of been dogging us and been with us historically, but I see no reason why you cannot open

it up and seek the best economic opportunities for renewables that will maximize the actual renewables that are placed into the ground. And if there's blending of more than 25 percent enables that outcome, that we should be open minded to that.

And I would urge that perhaps you revisit that first definition and that limit allow us to be economically and functionally open minded at this point and from here on.

PRESIDING COMMISSIONER MOORE: Do you have a standard or calculation in mind? In other words, at some point that marginal curve would start to drop off pretty precipitously, I mean do you have some sense of where that would be?

DR. AITKEN: It goes from technology to technology. The ones I'm most familiar with is solar thermal electric, and indeed there are major projects going in. One plant, for Spain, which is going to be 90 percent fossil fuel and 10 percent renewable. But the 10 percent renewable is significant in terms of megawatts. And then permits a gradual backing off of the fossil fuel and an enhancement of the renewables in the future.

To answer your question, no, there's no hard and fast particular one. There's no precipitous drop off. It's a continuous curve, and it varies from renewables to renewables. On

those that are close to market prices it probably wouldn't take much.

I'm simply asking that the purpose is to get renewables in the ground and provide reliable energy and as clean energy as possible, and I do believe it would benefit all of us if we could stay open minded on the way we economically approach that limit.

COMMISSIONER SHARPLESS: Could I just follow up. Would it be part of your vision on this in order to put more renewables in the ground, as you put it, to start off with greater flexibility and then have some kind of phasing process where it becomes greater and greater renewable?

DR. AITKEN: I'd be tempted to answer yes to that, but, again, I, what we're trying to do is to maximize the benefit of the expenditure for the renewables to the greatest amount of renewables from the allocated expenditures of AB 1890. And it could well be that a permanent arrangement of 50/50, I'm just making these numbers up, but of something like that, could be facilitate a long-term contract which would then benefit the renewables.

So I'd like to suggest even more flexibility at this point. Simply that this be opened up for analysis and policy, and

the very questions you're asking should be some of the answers we ought to be able to come with both from the standpoint of testimony and analytically this month collectively.

COMMISSIONER SHARPLESS: Would that be for all three, well, I guess we have two categories and a split within one category. Existing, emerging and new?

DR. AITKEN: Well, we're probably dealing with the new in that the existing are there and whatever balance they are already they're solar thermal already has 25 percent, the wind has none. But it doesn't need it.

COMMISSIONER SHARPLESS: And what would you say about emerging?

DR. AITKEN: Emerging is largely the photovoltaics. And emerging really is going to be, well, it isn't just photovoltaics, of course, fuel cells and there are some other things like that. But they tend to be distributed technologies. And they're evaluated on very different kinds of merits.

Again, if an opportunity came up whereby an emerging technology, a combined fuel cell and some kind of conventional would be appropriate, I'd like us to stay open minded on that. I'm really not prepared to give you more of the particular numbers

so much as responding to the definition that I saw.

COMMISSIONER SHARPLESS: I guess my concern would be from experience in the development process making sure that we maximize the renewable side. It's been my experience that sometimes renewables get a hook in there and get the funding, but it's really directed toward the fossil fuel side, and, therefore, we really never maximize the renewable side.

That would be my concern. I don't know how you deal with it.

DR. AITKEN: I absolutely share that concern. As my understanding is of the 540 million, or whatever subset of it actually comes out, is to be devoted to the renewables side. The fossil fuel side is not going to be eligible for those funds. Such that we have an entire project whereby some of it may receive assistance from the renewables fund, but the whole project itself has to make it in the market.

Remember we're really given an incredibly short four-year leash here, and we've got to come up with mechanisms whereby we continue to put renewables in the ground with long-term assurance that are market based, a situation that's market based.

I don't see, I think it would be rather straightforward

for you to prevent the kind of abuse that you're raising here just on how clearly you define that.

COMMISSIONER SHARPLESS: Have you already put together a proposal?

DR. AITKEN: No. I'm just reacting right now to this.

COMMISSIONER SHARPLESS: Okay. Thank you.

DR. AITKEN: But we would be pleased to.

PRESIDING COMMISSIONER MOORE: If you have comments, we'd love to see them. Please submit them to the docket. Thank you very much.

Anyone else who wish to address us on definitions? Yes.

MR. GRATTAN: I did not fill out a blue card. I'd just like to respond to the Doctor here briefly on the definition renewables.

My name is John Grattan.

PRESIDING COMMISSIONER MOORE: Want to sit down and give us your name and your organization?

MR. GRATTAN: My name is John Grattan; Grattan, Gersick, Karp and Miller. And I appreciate what the doctor from the Union of Concerned Scientists is saying about the need to blend. However, I, in the definition of renewables, we are

working in the context of a very clear statutory definition here, and I don't believe that this Committee or this Commission can change that statutory definition.

And we might talk about whether the law should be changed, but right now I think one of the benefits of this renewables certification process is, in fact, an etched statutory definition of what a renewable is, and, in fact, it's based upon some history. History with the FERC, and history with a California Public Utilities Code.

I do want to add that there is an opportunity in the law to have a customer driven blend of conventional and renewable power. And that's Section 365, I believe, which allows a customer early direct access if it can identify a blend of 50 percent renewable power and 50 percent conventional power.

And I think that's perhaps the mechanism under the existing law. And thanks for your time.

PRESIDING COMMISSIONER MOORE: Thanks. Well, we're also concerned if people see flaws in the way the law would end up being implemented we'd like to know about it. It's not that we'll be able to change all of that, but we'd like to know about it.

Anyone else on the question of definitions? Yes.

MR. KELLY: Steven Kelly, Policy Director for Independent Energy Producers. I just wanted to briefly respond to the Staff's definition of "emerging," which, as I recall, I believe what they said part of the definition --

PRESIDING COMMISSIONER MOORE: Back up on the -- put emerging back up on the overhead.

MR. KELLY: I believe what the Staff had as part of their definition was the phrase "early stages of commercial readiness," and that's the letter language in that definition. The bill itself speaks to the issue about significant commercial potential. I think which is potentially a little different than early stages of commercial readiness, and I would just urge the Commission to take that in mind.

The problem with the definition of emerging technologies is it isn't really known. It's certainly true that during the discussions of AB 1890 the monies that were set aside for renewables was clearly not meant to supplement or supplant any monies that would come from RD&D, and I believe we need to be careful about where we make the split on this as we move forward.

PRESIDING COMMISSIONER MOORE: Thank you.

COMMISSIONER SHARPLESS: Mr. Kelly, can I ask you, you

have a concern then with the, perhaps, the strict application of early stage of commercial readiness, whatever you think that might mean, that's not defined; and I guess it would mean a lot of different things to different people. What is your definition of emerging renewables?

MR. KELLY: My personal definition would be something that is potentially commercially viable within a, our, near term. I would say near term being the end of the transition period. So we would see that as being significant commercial potential.

What I would be hesitant to do is get into a process where we're trying to define what an early stage of commercial readiness actually is and the diverting resources toward some technologies that may not be viable within the five-, ten-year time frame.

COMMISSIONER SHARPLESS: So you see viable as being more ready than commercial readiness. It has an economic, a greater economic definition.

MR. KELLY: I think an ability to enter into the market. I'm not clear what the Staff is talking about the early stages of commercial readiness, what kinds of technologies they're considering for that or applications.

PRESIDING COMMISSIONER MOORE: So your definition would have if something was viable in the sense that it was up and competitive within a five-year window, if I'm taking the number that you just said, it would probably qualify.

MR. KELLY: I think so. Yes, that's kind of the sense I have.

PRESIDING COMMISSIONER MOORE: Okay. Thank you.

MR. ALVAREZ: I have one quick question because when you look at the bill in terms significant commercial potential are, in fact, there, and I guess they just get you to the question of whether you believe the Committee has to define significant, let alone commercial potential.

MR. KELLY: Well, I don't think that we'll probably get an answer to that, but I do think there's a difference between significant commercial potential and just the early stage of commercial readiness. I'm not quite clear what that is. It seems so much broader than the intent of AB 1890.

MR. ALVAREZ: But there seems to be at least an implied judgment there that's expressed by the Committee and ultimately by the Commission of the commercial potential of the emerging technology.

MR. KELLY: I think, yes, I think the intent of the parties in AB 1890 was to provide funding mechanisms for existing and new technologies which would be able to enter into the market and be commercially viable.

MR. ALVAREZ: Thank you.

PRESIDING COMMISSIONER MOORE: Thank you.

Sir?

MR. JUDD: Mr. Chairman and Members, my name is Bob Judd. I'm here representing the California Biomass Energy Alliance. And I would like to offer three observations regarding definitions that may be useful as the Members and Staff address this issue further.

In the category of renewables generically sometimes there is very little differentiation other than a date of construction to segregate existing from new. In a case of biomass, for example, the plant that we would build in 1998 would be nearly identical to the plant that we built in 1992. There may be modest process improvements.

I cannot speak for them, but I assume energy of thermal technology area the engineering is pretty well optimized on the plants and again minor modifications. So the lines became fussy

between existing and new, and, in fact, may apply more to certain classes of technologies than to other classes of technology.

Secondly, to follow on Steven's comments, I would add the following. If the existing projects have to be competitive in the marketplace in the year 2002, do the new projects have to be competitive in the marketplace at 2002? Is that an assumption that Commission and Staff has made, or is it a demonstration that would be required?

Related, what criteria might one use to replace existing projects with new projects if it's only a date of operation that differs? Why degrade the value of an existing facility to build a new facility that's much the same, and, in fact, delivers electricity at much the same costs?

Secondly, when does the emerging class become competitive? Are there any requirements, and if it's left open as the definition of emerging seems to do, that is without a time certain as Steven suggested, shouldn't then the dollars for emerging that seem to be on the horizon but far in the distance come in part from the RD&D pool of funds in order to preserve funds in the renewable allocation for renewables that deliver market based electricity?

I'm not necessarily recommending that. I'm raising it as a question because some of the emerging technologies clearly will not be at market in the year 2002. You may want to make a concession and say that by 2004, 2006, they must be competitive. But if you don't do that, it remains rather open ended.

Final comment from me, as you consider definitions, certainly industry can help you with these. I think you have to consider exclusions under the definitions as well. I think you have to face the issue of whether or not utility owned renewables are eligible for these funds, if they have other sources of above market support such as the CTC, you have to address the question of out-of-state renewables who sell into California. Our reading of the bill is they're not eligible for the funds, but that's a question that should be addressed.

And also the question of hydro electric projects. Although they are mentioned in the bill, hydro electric are mature technologies. They're intensely competitive selling well below market in most cases, and they're multi-purpose projects that are not electricity generators necessarily. They have recreational, agricultural, other benefits, and they've often been heavily subsidized in their construction.

So I think the question of the eligibility of hydro projects if, for example, they sell below market, or if they have been heavily subsidized in the past, needs to be explored as the definitions proceed.

PRESIDING COMMISSIONER MOORE: Thank you very much. Interesting comment about the emerging. You could have emerging technology as a process rather than a product. And I should just reiterate that it's our assumption that the four-year window is just that, it closes after four years, and that we won't, at least under what we understand today, we won't be playing in this game beyond four years. So we are using that as a cutoff in our deliberations. We're not planning a continuous revisitation of this. Thank you.

Yes, sir?

MR. HINRICHS: I'm Tom Hinrichs representing the Geothermal Energy Association, and I'd appreciate it if you'd put the definition of "new" back up on the screen there.

One of the concerns I had in seeing that, I believe it indicated that construction was not to start until after 01/01/98, and I just wanted to verify that.

"First placed in service on or after January 1, 1998."

That's a little different. I think that would work. I just wanted to be sure that in the definition of "new" it's assuming that we work through this, and that there is an opportunity for new projects that they could get started on their actual construction prior to 01/01/98 if that was a desire on the part.

The other thing Mr. Judd pointed out a number of things that are involved in the overall process that definitions have an impact on. And I would just say that there probably should be a little bit of a hesitation on locking in on definitions until things such as where the allocation goes, what qualifies for a particular allocation. You can get locked in on definitions a little too early before the overall plan is laid out, and I would just like to make that caution.

PRESIDING COMMISSIONER MOORE: Thank you.

Anyone else on definitions? Yes, ma'am.

MS. RADER: Good morning. My name is Nancy Rader with the American Wind Energy Association. And I just had three brief comments on definitions.

First, I wanted to agree with Bob Judd that we think it's appropriate to exclude utility owned resources that are eligible for CTC recovery of above market costs given the extreme

limitation of the funds that are available.

I also agree with Mr. Judd that it doesn't make sense to draw hard lines between existing and new resources. Actually I guess I agree with Tom Hinrichs on that. At least at this time. New resources are not necessarily less costly or more technologically advanced than existing resources. And therefore allowing an existing project to close while an identical new one is brought on line does not necessarily make economic sense.

And thirdly, I wanted to comment on the percentage fossil fuel requirement. I think it's possible to accommodate the concern of Don Aitken by defining renewables as a project that includes up to 25 percent fossil fuels, and also allow projects to use more than 25 percent fossil fuel but only allow that portion of renewables in those projects to qualify as renewables.

So that anything it includes up to 25 percent is wholly renewable, but above that only the renewables portion is renewable. And I think that could be done under the existing statute.

Thank you.

PRESIDING COMMISSIONER MOORE: Interesting. Thank you.

Anyone else on definitions? Yes, sir?

MR. NELSON: Good morning Commissioners. My name is Les Nelson. I'm here today representing the Solar Energy Industries Association.

Just very briefly I would like to take exception to the notion that an emerging technology must be at market price at the end of this term. I believe that the allocation of funds for the purpose of commercializing emerging technologies should take into account significant price reductions over that period of time, but not necessarily bring it all the way down to market price.

There have been mechanisms that have assisted various other technologies over time in lowering their price. Today we have an opportunity to bring some new technologies that haven't benefitted by those mechanisms to market price through the use of AB 1890 emerging renewables funding.

So I would urge the Commission to avoid moving towards a situation where you're requiring all emerging technologies in order to make use of these funds to be at market price at the end of that term.

PRESIDING COMMISSIONER MOORE: Thank you.

Manuel?

MR. ALVAREZ: I had one quick question, Mr. Nelson.

Because it gets me to this question of what you mean by market price, and what do you have in mind when you refer to market price?

MR. NELSON: Well, what I have in mind is that it be competitive with other sources, you know, the lowest cost sources of electricity at that period in time. I'm not certain that it's the case that you will see all the emerging technologies be at a point where they'll be able to compete with the various other renewables and certainly not with fossil fuel generation technology at that point.

But there's a clear history of increasing markets for these technologies as their price comes down. It doesn't necessarily have to be at market price for their markets to increase exponentially. And that's very definitely the case with photovoltaics and could well be the case for the other technologies as well.

MR. ALVAREZ: Then I guess kind of relate to what Mr. White brought in in terms of consumer choice. It seems that there's a consuming end of the market that is making a judgment that they're willing to pay that higher price or higher cost of renewables, and isn't that a reflection of the market price also?

MR. NELSON: Yes, it would be. Our concern would be that those making those choices would decide that their conscience, if you will, was satisfied by buying a much lower priced renewable technology preferenced over a higher priced technology, and that you would disadvantage the higher price in that regard.

You may well have some end users that would choose to buy a significantly higher priced renewable, but that may not be sufficient to accelerate the price decline in that technology over that period in time.

MR. ALVAREZ: I guess that's basically what I see as the market development process. Now whether that process of developing that market is merely the four-year transition that's identified in this bill or is some longer period of time, market development needs to be undertaken.

MR. NELSON: I would agree with you. In the scenarios that we've been working with Staff on there could well be mechanisms that could extend the usefulness of those funds beyond that four-year period and which would serve to help that declining curve continue down over a longer period of time.

But I just think if we leave it strictly to the market,

we may find that there is not enough purchase characteristics on the part of consumers to go out and spend significantly more per kilowatt sufficient to reduce the price of the technology.

MR. ALVAREZ: Thank you.

PRESIDING COMMISSIONER MOORE: Thank you.

Yes, sir?

MR. WILLIAMS: Thank you. My name is Tom Williams. I work at the National Renewable Energy Laboratory in Golden. I'm the manager there of the Solar Thermal Power Program.

I would like to go back and throw in my support for the comments that Donald Aitken started and several of the other speakers have pointed to. That is that we should avoid definitions of what is a renewable based on any arbitrary assignment of how much fossil energy that they use.

In the area of solar thermal there have been several new technologies that have been merging in the past couple years. Based on our analysis of these at NREL not only are they much more suitable for early market entry of the technology, but they can dramatically decrease the cost of solar energy. In some cases by a factor of two.

And so to eliminate these from the market today not only

would I think it set the technology development in commercialization back a number of years, it would also potentially keep some of the best technologies out of the market.

PRESIDING COMMISSIONER MOORE: Thank you. Anyone else who wishes to discuss the definitions terms with us? Okay.

Mr. Kirshner.

MR. KIRSHNER: Hi. I'm Dan Kirshner with the Environmental Defense Fund. I just have one concern with the definition of "new" put up by Staff, and that doesn't seem to make --

PRESIDING COMMISSIONER MOORE: Put that back up for a second.

MR. KIRSHNER: It doesn't seem to make any consideration of whether a project is under an existing standard offer of contract. And it seems to me that this definition does allow a project under standard offer of contract to become new. And I think there have been a number of concerns about projects having other sources of support and the limited funds we have here.

It seems to me unwise to, I mean, I guess I'm interested in what people's opinions are on this, but from my own point of

view it seems unwise to let such projects qualify as new.

PRESIDING COMMISSIONER MOORE: Okay. You're sort of merging on to one of the other topics for later, but clearly, the SO4 contracts are going to be on our list to discuss.

Thank you.

MR. KIRSHNER: Okay.

PRESIDING COMMISSIONER MOORE: Yes, sir?

MR. GEORGE: Good morning, Commissioners. My name is Ranji George. I'm with the South Coast Air Quality Management District.

Just comment for clarification, maybe the Commissioners can comment on this, too, the AB 1890 defines emerging technology or puts a condition saying that it has to have market potential within a certain number of years, and the comments here reflects some split. Some people defining it in terms of three or four years, some people longer term.

But also I would like to, another comment on the part saying that perhaps we should extend the geographical dimension of defining market potential, maybe a technology could be viable for a few years worldwide but not necessarily in California.

So like I'm thinking specifically, so I do not know

whether the bill provides for that explicitly, but if so I think we should address that as well. Thank you.

PRESIDING COMMISSIONER MOORE: Thank you.

Anyone else who wishes to address or comment to us on definitions?

MR. FERGUSON: My name is Rich Ferguson. I'm the Director of Research for the Center for Energy Efficiency and Renewable Technologies.

I have a question. We were very involved in the development of the legislation; and our memory, of course, was that the division of the funds between new and existing was between new projects and existing projects. Not between new technologies and existing technologies.

And I don't have my copy of the bill with me so I don't remember what the language was, but I notice in the definition that you have here it says, "new renewable technologies." So there's this little disconnect over what the intent of the legislation on dividing the money.

Does somebody have their copy of the bill here? I mean am I wrong of what --

MR. SCHWENT: Commissioners, we do have our copy of the

bill here, and that is one of the difficulties is that the bill is written in terms of the word “technology” even though the logical interpretation would be a plant or a facility, etcetera. So what we’ve tried to do is take that definition of technology and then define it to be a generating facility where that’s appropriate.

PRESIDING COMMISSIONER MOORE: I think everyone that we’ve talked to seem to support the interpretation that you have of that, but again --

MR. FERGUSON: That may need to be something that we put in the clean up legislation. Although I notice that several of the comments seem to go on that issue about whether or not a plant built after ‘98 was a new plant but not new technology, and therefore it should, I mean it was some confusion among some of the testimony on this issue, too. So that should probably be cleared up. Thank you.

PRESIDING COMMISSIONER MOORE: Thank you. Anyone else on definitions?

With that, I’m going to shift gears and start talking about the mechanisms for allocating the funding. And I realize we’re all cognizant of the fact that there is a subtle line between the mechanism and the criteria. We’re not going to call

time out if anybody slips between those, but again we're trying to cleave the world in such a way that we can get as full and understanding of the differences between the mechanisms themselves and the criteria that might be applied.

So I'm going to ask you to focus on that difference. Again, if you slip over the line, then obviously it's all to our good for understanding the issues. But we're going to try.

I have five people signed up to speak specifically on that topic, and we'll try and do that and wrap up at noon. We'll take an hour break for lunch, and we'll come back and take on what we haven't allocated.

Let me start with Rich Ferguson and ask him to come back and talk a little bit about the allocation mechanisms that might be out there for us to use. Mr. Ferguson, welcome back.

MR. FERGUSON: In addition to my earlier identification, I'm also the volunteer Energy Chairman for the Sierra Club. We represent approximately 100,000 households in California. And judging from the interest from the marketers, I assume that we are prime customers. Certainly that's the feedback that I'm getting from my constituents.

And certainly, you know, we see the goal of this

exercise as developing the market. The goal is not to protect some existing division of renewable industry projects. It's to develop the market and make sure the people like my constituents that want to buy renewables and send their energy dollars to non-polluting resources have the ability to do so.

Without a doubt, the largest market barrier to the development of this market is the CTC. And just the timing of that raises a problem.

And when you're talking about mechanisms for allocation, one of the things we don't know is how much of the CTC for small customers is, in fact, going to be paid down in four years, and how much is going to be remaining out past the fifth or the tenth year in order to get the rate reduction.

I think it makes a major difference in how you construct these mechanisms to allocate the funds.

Our overall guidance is that this Commission and the Legislature should not try to micro manage the development of this market. For the life of me, I don't know what my constituents want to buy, I don't know what price they are willing to pay, and I'm really interested in finding out. And I think Mr. Alvarez' comment on the price of solar is a good case in point.

I may be wrong, but my guess is that customers will pay a premium price for solar power as opposed to wind and geothermal and biomass, for example. I don't know what the differential is, but I'm eager to have somebody come to them with a price and see where the customers are on this issue.

So I think you should be wary of trying to make these decisions ahead of time. If you're right, then the transition down the road will be smooth; but I think there's an awful big chance of getting it wrong and finding out that what you have been supporting in the interim is not, in fact, what customers want to buy, and in fact this transition period will end and we'll be right back where we start from.

I certainly support the notion that the allocation mechanisms should be as simple as possible. Our preferred mechanism, I think, is the customer rebates to offset the stranded cost payments they're going to have in the meantime.

About a year ago we floated the idea that renewable customers should be exempt from the CTC. This was just a week before a company tried to buy some power from an irrigation district and caused a big hoorah and we dropped the suggestion. But nevertheless, that is the market barrier that we're all out

there.

But what has to happen between my constituents and developers is that there has to be a transaction. And I don't think it matters a whole lot whether you put the money into the customer end, into the developer end, into the marketer end. I think what we need to see is, in fact, there is a viable transaction that wants to happen, and that with the appropriate use of funds can overcome the market barriers and make that happen.

We worked during the working group process to help develop the auction mechanism that Mr. Kirshner from EDF will present to you. We are interested in that mechanism, and there are some new wrinkles which he will present today I'm sure. The worry that we have on that is that the mechanism becomes too complicated and we'll be back into the BRPU mess which none of us want.

So we might also just do what the feds did and say we're going to put out a penny and a half or two cents kilowatt hour to anybody who wants to buy renewables and see if there's any takers. I mean it might be too big, it might be too little, it's a chance you take. The auction mechanism is obviously an attempt to avoid

that problem, but it raises other problems.

At this point we're not prepared to make a final decision on that. We will be filing more formal comments later on.

PRESIDING COMMISSIONER MOORE: Thanks. You realize that you leave us, your comments necessarily leave us in a bit of a dilemma because in order to have a market to react to to refine, for instance, a customer rebate, to get it back out, we'd have to have that market up and operating today. We'd have to have these out for choice. They'd have to be priced and accessible for selection, if you will.

In the absence of that, which could come, let's make this up, as early as two years from now let's say we had an open market that was you could get some figures back on performance of, so in the precursor to that open market, we're going to have to make a choice, an informed choice we hope, to set some mechanism up that will carry us into that market, whatever it is.

And so we'll be entertaining all of your comments to soften the edge between the necessary front end and what's likely to be a smoother transition period halfway through this.

MR. FERGUSON: We fully understand that. We struggle

with that everyday on this sort of chicken-and-egg problem of how can we get customers interested in buying when there's nothing to buy and so on.

PRESIDING COMMISSIONER MOORE: Just so you understand, and this is directed obviously to everyone in this room or whoever's listening, they on the Internet or otherwise, we will very quickly here leave the theoretical playing and have to go off into a practical outcome and make a recommendation. It may be necessarily rough and require adjustment later on, but you realize we're going to have to select from the best that you have to offer and that our Staff has to offer, and we'll be making a choice at the end of this. So we may revisit this in two years to clean it up. I don't know.

Thank you. I'm sorry. Questions? Staff? Marwan?

MR. MASRI: I think my turn is second, but just to make a few comments on this.

PRESIDING COMMISSIONER MOORE: Yes.

MR. MASRI: I'd just like to urge the parties to, when they comment on the allocation, to be clear about what stage in the allocation process we're talking about. For example, at the broadest level, what Rich is talking about here, is the renewable

funds can go to rebate CTC or it can go to fund suppliers. That's one very broad level of allocation here.

Another level of allocation may be in the broad category existing versus new. Level below that would be perhaps by technology within each of these categories.

So to the extent possible, if you're clear about what level of allocation you're talking about. At the same time proposals for what kind of mechanisms are applicable at what level of allocation I think will be very useful.

I just wanted to make those comments.

PRESIDING COMMISSIONER MOORE: Thank you.

MR. FERGUSON: I'm sorry, Marwan, that was what I was trying to get at with my comment that we should keep them as broad as possible and not try to design. I mean we're stuck with the language in the legislation between existing and new, and we will have further comments on that down the road, but we think you should avoid trying to do it by technology, by, you know, any other sort of merit, you know, by cost, by locale, by anything else. Because we don't think we can possible get that right.

So that was what I was trying to get at at my comment was to keep it as broad and as simple as we can and see what the

market, how the market develops rather than try to figure it all out ahead of time.

There are going to be different mechanisms for new and existing. But even the existing mechanism, one of our goals is to get existing projects hooked up with real customers that want to buy that stuff. So the mechanism for allocating, if somebody takes a contract buy out, for example, we think that they should have incentives to go into the market in the form of customer rebates like new projects to make that happen.

So, you know, it's not a one size fits all situation. Especially new versus existing utility projects. Suppose somebody buys geysers, you know, on and on and on. But to the extent possible that we don't try to get, you know, so much money for this project, so much money that project, or even technologies. That our preference. And find out what customers want to do.

PRESIDING COMMISSIONER MOORE: Thank you.

All right. Dan Kirshner.

MR. KIRSHNER: Thank you. Did you get copies of the handout Proposed Funding Allocation Mechanism for New Renewables Projects?

MS. SHAPIRO: We did.

MR. KIRSHNER: The proposal builds on work EDF did with a number of other parties in the PUC's working group.

MS. SHAPIRO: Dan, please identify yourself and your organization and spell Kirshner.

MR. KIRSHNER: It's Dan Kirshner with the Environmental Defense Fund. K-i-r-s-h-n-e-r.

MS. SHAPIRO: Thank you.

MR. KIRSHNER: This builds on that work with the renewables working group. I know you've, although we have done further work with a number of parties, we've been in contact with a lot of people, and this actually represents what I'm calling a merged proposal between the earlier proposal for a pure production credit and much concern that funding be available as a customer rebate. And I'm calling this a merge proposal.

I know you've asked for consensus and wanted to know who's in a consensus proposal. At this point, time is very short. I have outstanding telephone calls to perhaps half the people in this room, and it may be efficient now to get reactions on just putting this out as a best shot at and to see how people, how they're going to be able to live with something like this.

Just in brief, funds are provided either as a customer

rebate or production credit per kilowatt hour. Once such a production credit or customer rebate is awarded, it's firm. I'm suggesting a five-year period, but it's available to that project.

And that the level should be set in a simple auction. And by simple, I mean first price auction, no other parameters. Not looking at what kind of project it is.

To keep the money flowing to get this to viable projects to get renewables in the ground, we have the "use it or lose it" provisions.

People can look at these. These aren't intended to be a bottom line of any. These are just suggestions on how this is supposed to work.

Why do it this way? We're looking for administrative simplicity. We're looking for the market to make the decisions.

All said and done, between a production credit that stretches over five years and getting money up front to build your project, it's a no brainer, we want our money, we need the money up front. But to have the market make the decisions rather than an administrative process. That's an investment banking function. And by providing the credit over time, we can have investors make that decision as to what the market's going to bear.

This is an approach to that chicken-and-egg problem. And we're hoping that everyone will consider it very seriously as an efficient mechanism to get this done.

The use it or lose it provisions are supposed to give people comfort that the money is going towards viable projects. If not, it's returned and re-auctioned quickly.

Customer class restriction is again to look for the viability of a customer driven market and the transaction costs to small customers seem to call out for special attention.

COMMISSIONER SHARPLESS: Mr. Kirshner, could I ask a question?

MR. KIRSHNER: Sure.

COMMISSIONER SHARPLESS: Would all renewables be eligible under your proposal?

MR. KIRSHNER: I'm proposing this just for purpose of starting discussion for new renewables projects only in the non-emerging technologies span. I believe this mechanism would work for emerging technologies, and that parties representing emerging technologies are amenable to this mechanism, but it would have to be a separate auction because we're at a different price point.

COMMISSIONER SHARPLESS: How then would we deal with marketing both existing and new? I mean, would this not confuse the customer? Is it really as simple as it sounds?

MR. KIRSHNER: I do not think existing -- I think existing, my definition of this would be existing can come into this process as long as they're not under a standard offer contract. If they're under a standard offer contract, they are contracted to deliver their energy to the existing utilities. They are not marketing to customers. So that's the way I solve that problem.

I don't know, you know, again, we'll have to see how people react.

COMMISSIONER SHARPLESS: So existing would qualify as long as they were not under an SO4 or some kind of standard offer.

MR. KIRSHNER: That would be my proposal.

COMMISSIONER SHARPLESS: Is there anybody who falls in between those categories?

MR. KIRSHNER: There must be gray, but we shall see.

PRESIDING COMMISSIONER MOORE: So the SO1, SO2s that are still out there as well.

MR. KIRSHNER: SO1 has no problem coming into this.

They're at a power exchange price. I have no problem.

COMMISSIONER SHARPLESS: I'm just trying to understand the proposal.

PRESIDING COMMISSIONER MOORE: I have a question on the proposal, and that is in your use it or lose it provisions, how would you verify whether something was actually up and use at the three-month cutoff? In other words, would you have an administrative report back? This was taken up, we signed a contract. How would you verify it?

MR. KIRSHNER: Well, what we're looking for is a quick, the quickest way to get to, you know, holding onto your money in that three-month period is to have some kind of statement of intention from an end use customer. And I think whatever that is would have to be shown to the Commission.

PRESIDING COMMISSIONER MOORE: To us. So we'd have a public filing process or an electronic filing process of some kind, and if you didn't clear the filing at *XX* date, time, you were out, and it immediately went back into the auction pool?

MR. KIRSHNER: Yes. I'd say, you know, this would be something where someone would assert they had done this and would be subject to audit. I don't know that it would be necessary to

check every last piece of paper.

The model for this, and the only model this country has for successful green marketing, is a small utility in upstate Michigan called Traver City. And a fellow went out, they sent fliers out and said would you be willing to buy electricity at a premium of 1.58 cents per kilowatt hour on renewable energy. And 200 people signed up, 10 businesses, and all they had to do was send a postcard saying, “Yeah, I’d be willing, and I understand I won’t pay until they’re actually delivering renewable energy.”

On the strength of that they were able to build one windmill, and it turns out that none of those people backed out. They all signed up when the windmill --

PRESIDING COMMISSIONER MOORE: Don’t they have plans for a second windmill as a result?

MR. KIRSHNER: I believe, yeah. They can move on to number two now.

PRESIDING COMMISSIONER MOORE: Right. Okay. And I understand that we’re going to be in receipt of some documents during the course of these hearings talk about some public opinion polls that were done to indicate the strength of consumer demand for some green power as well. So I think those will either add

some strength to the arguments or give us at least another dimension in which to look at them.

Other questions for Mr. Kirshner? Thank you.

Marwan.

MR. MASRI: I have a quick question.

Dan, end use customer under use it or lose it, would that include a power exchange or a utility? Do you have in mind an end use customer who does not resell?

MR. KIRSHNER: Correct. A reseller can get those letters of intent, but the worry is that you have a paper company in the middle saying, “Oh, sure, I’m willing to buy.” We need real customer intent.

If there’s an intermediary who’s looking for customers, that’s fine; but that intermediary should then show real intent from real customers.

MR. SCHWENT: Okay. I guess just so I’m clear then, so a green marketer could provide this letter of intent, but then you would want some evidence that that green marketer actually had end use customers signed up.

MR. KIRSHNER: I would want the green marketer to show customer intent, not the green marketer’s intent.

MR. SCHWENT: Otherwise this end use customer could be a big industrial user, a hospital, an irrigation district, a utility, whoever.

MR. KIRSHNER: I had not thought that a utility would qualify, but that's something to consider.

PRESIDING COMMISSIONER MOORE: Okay. Thank you very much, Mr. Kirshner.

I'm going to go to Tom Hinrichs.

For your information, I have Mr. Hinrichs, Mr. Judd and Ms. Rader. We'll try and go through their comments, and then we'll break for lunch.

MR. HINRICHS: Thank you very much. I will try to keep it very brief. I do have a couple of overheads that I'd like to have brought up here just momentarily.

And my comments are basically about allocation and methodology. Let me address the existing allocation initially, and then talk just briefly about new.

We, in the geothermal energy industry, have participated in the Public Utilities Commission work on determination of what the value of SRAC should be during the transitional period. We were anticipating that we might be able to get some support in

that arena that renewables are different than gas projects from a standpoint of their avoided costs and were unsuccessful in that.

And there was a significant amount of testimony put into that record that I have included with my filing today here. I think there's some, it's called Joint Parties Proposal for Market Based Reform of Short Run Avoided Cost Methodology. And we were unsuccessful.

As you know, the legislation somewhat put into place the work that was done during the MOU of establishing an SRAC transition that is tied to a gas price at the California border. And so we view that allocation of funds for existing projects basically as an SRAC adder during the transition period.

And then who is the ones that should get it; I would like to have this slide put up. This first slide has the indication of the generation by technologies during the four years of transition of projects that have basically fallen off the cliff in their ISO4 contracts.

As you can see that moves in 1998 from 7.57 gigawatt hours to the year 2001 to 15.17 gigawatt hours, for a total of 44.7 during the transition period.

Our association would like to have the emphasis on the

unallocated funds on new projects, and with the 40 percent or I think it's $216 million being indicated to existing projects, you would see there by technology how that would develop.

If the emphasis is on existing projects, the next slide just takes that table and adds I believe it's 50 percent to the numbers. You go from 216 to 320 then for existing projects. And the effect is that the rolled in average cost that would be an SRAC adder in those two scenarios is about a half a cent if the 40 percent of the funds go to existing projects and .72 cents per kilowatt hour if it is the higher level of the 60 percent going to existing projects.

Quickly from the standpoint of new, we would like to see a bidding system of some type that would be utilized with the funds that are directed toward new on across the board all technologies so that there would be competition for that money as the act has asked.

One of our members has suggested that the money that's allocated for new could be put into a revolving fund that could be added to the financing of the developer themselves and then paid back as revenue comes in. This would continue that amount of money delegated for new on a long-term basis. There's been some

concern, I think particularly for new projects, that this money continue beyond it. With a revolving fund use of that money where it would be borrowed and then paid back as revenue came in, this would enhance the use of those funds.

That's about the end of it. And I'll, if you have questions, I'll be happy to do that, or let the other folks come on.

PRESIDING COMMISSIONER MOORE: Marwan.

MR. MASRI: Tom, the short term avoided cost is that both energy and capacity, those projects? That have shorter of low cost on both, or is it just the energy?

MR. HINRICHS: The SRAC adder is just on the energy.

MR. MASRI: So some of these projects would still have SO4 capacity payments that you included here?

MR. HINRICHS: Yes, that is off the cliff from the standpoint of the energy only. The capacity payment, as you know, is a 30-year obligation.

MR. MASRI: My next question is as you know as the projects continue to go off the cliff, these numbers would be going up, your gigawatt hours. So as of what date are those numbers?

MR. HINRICHS: Those are precisely each year by year. What generation there is from the various projects that are off a cliff.

PRESIDING COMMISSIONER MOORE: Vince.

MR. SCHWENT: Tom, on your chart you list the different technologies. You break it out by technologies there, and you do show that if one took that pot of money and spread it even over the projects that are off the cliff you end up with a number of something on the order of less than half a cent to less than three-quarters of a cent.

MR. HINRICHS: Forty-eight tenths and 0.73 I believe the numbers.

MR. SCHWENT: Is it your proposal that this money is just spread equally over all technologies, or that it would be allocated to the different technologies in proportion to the numbers that you have there?

MR. HINRICHS: I would suggest just an average across all technologies of a flat SRAC adder.

MR. SCHWENT: So in other words, we would put out a number, we'd say we're going to pay a half a cent or three-quarters of a cent as an SRAC adder, and any and all

technologies can come and compete openly for that money on that basis?

MR. HINRICHS: No, I would say that those qualifying facilities that are beyond the cliff and that are operating, this is paid as they operate, would receive that adder.

MR. SCHWENT: All right. But I guess what I was trying to get at is we know from previous testimony and from the months that you and I spent in the renewables working group earlier this year that some of the well established technologies like solar thermal and biomass apparently have higher operating costs than your average geothermal or wind plant.

So what happens if the half cent, for instance, isn't enough to keep a biomass plant operating, but it would be enough to keep a geothermal plant operating? What's going to happen? Is the biomass plant shut down, and then that money's available to subsidize more geothermal, or what would happen under your scenario?

MR. HINRICHS: I haven't addressed those issues, and determining the only way I've addressed this is that I think it's very difficult to determine who's the most needy, and a criteria for that is avoided by this.

Let me just make a comment on new. Would the funds allocated to the new, were they a consideration that about two cents per kilowatt would be the differential between market and a new renewable project, and that's somewhat substantiated by the data that came out of the bidding the BRPU between gas projects and renewables. That would, with the higher level at a 60 percent money put into the new projects, that would give the ability for about 250 megawatts of geothermal biomass type plants that have a high load factor, or 1,000 megawatts of solar or wind plants that had the 25/30 percent wind factor to be financed under that basis if you look at spreading that dollars over a seven-year period which is a reasonable thing when you're looking at financing these type of projects.

Obviously if you threw the 20 percent unallocated funds to existing, those numbers would reduce to something lower. But that's the range that we're talking about of the availability for financing new projects under this.

MR. SCHWENT: Just one quick question about your last comment about possibly using the money for some sort of loan fund.

MR. HINRICHS: Yes.

MR. SCHWENT: To new projects. We've done a little

work on that, and there are some tax credits, with especially I think the ten percent federal ITC that's available to geothermal as well as solar projects, were you taking that into account that if the state made that loan that it may poison the ability of a geothermal project to get that ten percent ITC?

MR. HINRICHS: No, I had not.

COMMISSIONER SHARPLESS: Do we have this in our package?

MR. HINRICHS: Yes, it is. And I did file 12 copies with the Docket Office this morning, and I have some here for you folks if you would like those.

COMMISSIONER SHARPLESS: Okay. Well, my question would go to a very simple one I guess. What would happen after four years on the existing plants?

MR. HINRICHS: Then they would have to be looking to the market for their SRAC payments.

Now, I think that the situation there is is that the reason that looking at this as an SRAC adder during that transition period I think is appropriate in that SRAC is going to be established at this gas price at that time. And we know that when we get to SRAC being established by the market that there

will be a true market there.

During this four-year transition, one of the reasons that SRAC was kind of agreed to as to what the methodology would be, nobody knows what that pool price is going to be, and we go off of that formula to the actual pool price when it's been demonstrated that there is a real market out there.

We, in the geothermal industry, recognize that we must become competitive and would look to out there when that market is established is that's what we would look to for SRAC. But during this transitional period, I think it's appropriate to look at those funds for existing plants as SRAC adders.

COMMISSIONER SHARPLESS: The SRAC then would be more of a market based price, is your theory, in four years.

MR. HINRICHS: Well, during the transition --

COMMISSIONER SHARPLESS: Why would that happen?

MR. HINRICHS: During the transition period, as Steve Kelly can speak more on this because it was part of the MOU and the final legislation memorialized that, there is a formula that was developed between the producers, gas producers, and the utilities of what, how, SRAC would be determined during the four-year transition period or longer than that until the market

truly is out there and people are looking to the pool to collect all their costs from it and not just marginal costs or some superficial bidding costs during this transition period.

COMMISSIONER SHARPLESS: Your pool is referenced to what? The 540 million?

MR. HINRICHS: No, no, the pool that people will be bidding power into.

COMMISSIONER SHARPLESS: Oh, okay. The power exchange.

MR. HINRICHS: The power exchange.

COMMISSIONER SHARPLESS: Okay. Thank you.

PRESIDING COMMISSIONER MOORE: Thank you.

Mr. Judd, welcome you back.

MR. JUDD: Thank you, Commissioner. In the interest of time, I would prefer to defer my comments on allocation until after lunch with two exceptions that I'd like to point out now.

Some of the recent testimony you've heard here in this past segment --

PRESIDING COMMISSIONER MOORE: We've got the time. Go ahead and we'll entertain your comments.

MR. JUDD: Okay, good. Some of the comments you have heard here make the presumption that all renewables are the same.

They have the same needs, they're interchangeable. The market based proposal that EDF has put forward would make that assumption as an example that they are interchangeable. It would be based on price alone rather than value and each of the technologies bring a different set of values to the marketplace.

I would encourage the Commission to explore ideas closely that make the presumption that all renewables are the same because, in fact, demonstratively they are not.

Secondly, I would comment on the all-size-fits-all proposal that Steven Kelly brought up earlier or observation that he brought up in the sense that it might be more appropriate as we look at an allocation mechanism to not fight the battle between what is existing and what's new here today, but rather let the individual technologies, once an allocation of dollars is roughly approximated or at least brought for discussion, let them decide what the allocation should be among existing and new.

We, in the biomass industry, certainly have no idea how the wind energy may want to fund or finance its repowered projects, nor how the geothermal industry might do a revolving loan. We don't know much about it. We don't care much about it. And we feel that we would be intruding in their business to try to

in a one-size-fits-all solution to try to wedge our ideas into their future. And we would feel that they would feel the same toward us.

So we would argue that the renewables should be able to come back to you with an allocation, a segregation of funds by technology group, differentiating among technologies, recognizing their needs and suggesting by themselves, generated from their own industry, what the proper allocation between existing and new would be recognizing the constraints that are built into the law, the 4040 and 20 constraints.

I'd like to stop my comments here. I have comments specifically on the criteria for allocation which I understand are discussion item after lunch.

PRESIDING COMMISSIONER MOORE: Thank you. Well, let me point out that we're going to welcome the ability to generate a consensus on any of these items. And should there be a working consensus that's emerging among groups as to allocations, we're going to very much appreciate seeing that.

I'm going to have to reluctantly decline the honor of assigning the allocation to those public groups since I seem to have been, and my colleague has, we seem to have been given that

responsibility by the Legislature, so I won't be able to hand it off. But I will appreciate the advice and will look forward to again, and we very much encourage that if there's a caucus or consensus building in the outside, that we hear about it.

And I've been a little remiss except that I wasn't quite expecting it in this, I will be asking should there be a report on any consensus building taking place you let me know and I'll try and have that be the first topic under each, or the first presentation under each topic.

Nancy.

MS. RADER: Hi. Nancy Rader again with the American Wind energy Association.

I wanted to just step back a minute from precise allocation mechanisms and look at the sort of assumptions that are going to go into our approach to whatever mechanism we decide to support. Because I think it's necessary to call out people's assumptions so that you know where they're coming from and so that we understand each other better.

I think as most everybody knows the production of renewable energy has declined. I think significantly in the last few years in California, and I think your next CEC report on the

wind energy production will show a decline in 1995 that will continue into 1996. And that's because the combined capacity and short-run avoided costs payments after the cliff are significantly below what it takes to sustain the operations of those projects that have ceased to operate or that have reduced their output.

So, therefore, I think it's necessary for there to be transitional support as soon as possible to maintain the existing renewable energy infrastructure in California while the competitive market develops and while the green market develops, and, furthermore, while long-term policy to recognize the value of renewables is developed either at the state or federal levels. Which I don't think we should assume is not going to be there.

I would just note that the leading Republican utility restructuring bill in Congress, as well as the administration bill, will carry provisions for long-term nationwide renewable energy policy. So I think we can't discount that outcome.

I think market prices are likely to be abnormally low during the transition period and are likely to rise after the CTC collection period ends. And though renewables may look to be above market during the transition, they may be viable after the transition, particularly if there's long-term federal renewables

policy.

But nobody can predict with any kind of certainty what those market prices will be or what consumers are going to be willing to pay for renewables. And, therefore, trying to forecast the viability of each, of any particular project, I think is just speculative, and it's not something we should venture to do.

I think it will take time to develop green consumer markets. In part because of the high transaction costs associated with finding the consumers and educating them about their options.

I would like to echo the comments of Bob Judd that each renewable energy industry and technology has unique circumstances that warrant tailoring the allocation of the transition funds to their specific needs.

As I think Vince pointed out, in the case of wind power, state subsidized financing would count directly against our federal production tax credit, and, therefore, that's a less attractive option for us, though it may be attractive for some of the other technologies.

We are leaning towards the attractiveness of allocating funds, a certain amount of funds, to each technology so that technology can determine for itself or propose to you what would

work best for that particular resource, rather than trying to come up with a one-size-fits-all strategy.

We think that allocation of the funds should be flexible and should reflect market prices during the transitional period. So it might make sense to use funds to maintain the viability of existing projects if market prices are low, but use those funds for new projects if it turns out that transition prices are high enough to sustain those existing projects. But that we should probably react to the market or try to have a flexible approach that reacts to the conditions of the market rather than deciding now regardless of what happens in the next four years.

We would advocate that to avoid delays in providing the transitional support to existing projects and to avoid complex and contentious and somewhat subjective determinations of need on a project-by-project basis that funds should be provided to classes of existing renewable resources where there are general indications of need, and that funds should be allocated on an across-the-board basis, again, by technology in terms of the specific technology's need in recognition of the public benefits that are provided by those renewable resources. Then the private sector can best apply those resources.

And in a case of wind energy, that might involve restoring full time wind farm operations. It might involve restoring operations and maintenance, staffs which have been drastically cut back. It might involve making major repairs. It might involve repowering, and it might involve simply investigating new market opportunities for those projects that are doing okay. They can use those funds to start venturing into the new market.

Finally I think we, as far as how funds for new projects are used, we think they should encourage long-term relationships between renewable generators, retail marketers and consumers, but that funding allocation mechanisms should be flexible.

For example, any party to a contract, whether it's the renewable generator, the marketer or the consumer, should be able to assign funds to any one of those parties as long as a long-term commitment through renewables is being made.

And that's because we fear locking ourselves into a consumer only approach because of the transaction costs and the delay that it may take in developing those markets, and we'd rather see a more flexible approach. Which sounds more like what Dan Kirshner's talking about. But we haven't looked into that

specifically.

So, thank you.

PRESIDING COMMISSIONER MOORE: Let me ask you a question about your bidding out on a sector-by-sector basis. What it would seem to imply is that if you gave a blanket allocation to a category, as opposed to allocating among a project-by-project basis, an option of some type or a bid process or some sort of ranking mechanism would have to take place out within that category. Is that correct?

MS. RADER: Not necessarily. I think it depends on whatever approach is proposed. It could be an adder approach. I mean the geothermal industry may propose a straight adder approach that Tom Hinrichs was talking about.

PRESIDING COMMISSIONER MOORE: There'd still be a ranking of some kind.

MS. RADER: Could be. Or it could be, I mean I'm just saying it could --

PRESIDING COMMISSIONER MOORE: First come, first serve?

MS. RADER: It could be. I mean it could be any of that. I think the point is just to allow each industry to figure out for itself what works best for that industry and to come up

with an approach whether it's competitive or a straight adder or financing or whatever it is that suits that particular industry.

PRESIDING COMMISSIONER MOORE: So you still see us making the major slice of this and allocating proportionately to what we see as the industry category of need, and then having the actual direct allocation within that category made by the industry participants themselves. Would we set the rules for that at this stage?

MS. RADER: What I'm envisioning, and I think there has to be consensus among the industries to do this approach, I don't really think --

PRESIDING COMMISSIONER MOORE: We couldn't just mandate it off.

MS. RADER: I don't think it can be done unless we can all agree, and we're talking about that. And I think there is some potential for that.

But I think, you know, the industries would need to propose an allocation scheme to you, and it may be consistent with, you know, the other proposals that are, we may be able to come up with common allocation procedures.

PRESIDING COMMISSIONER MOORE: Think you have enough

time?

MS. RADER: Yes, actually I think we do.

PRESIDING COMMISSIONER MOORE: Good. Have any of your folks done any calculations on the relative cost change after the CTC is off and what you think is going to happen to prices?

MS. RADER: Some have, and those are very, I think, subjective to some degree.

PRESIDING COMMISSIONER MOORE: Obviously. I mean, it would have to be. Any time you spin the crystal ball, it's going to be.

We'd love to see if there are people out there who have done calculations, whether spinning the crystal ball for the post CTC world on relative prices, we'd love to see your work. There may, in fact, I don't know, mathematics has a way of converging, if you will, and if there are calculations out there, please, we'd like to have them forwarded on through Staff and see if there's any convergence.

Jan.

COMMISSIONER SHARPLESS: No.

PRESIDING COMMISSIONER MOORE: No. Let me just indicate in this building there is a concessionaire who runs the

snack shop who would love to have your business. And in the Bateson Building across the street to the south is a facility, and across the street at Water Resources. And Marwan has raised his hand.

MR. MASRI: We have a map and some places in the area that people can walk to, as well, on the table outside.

PRESIDING COMMISSIONER MOORE: There is a map out back to indicate some of the opportunities. We'll be back here at 1:15 to reconvene.

[Lunch Recess]

PRESIDING COMMISSIONER MOORE: Welcome back to the continuation of our workshop on renewables. And let me just say that we've been getting, as we had hoped, a good range of opinion, a good range of ideas, and I want to take this opportunity to remind everyone that while that is intellectually satisfying in the end, as has been pointed out to me by several speakers, we're going to have to reach consensus on this.

So where you see an opportunity to forge a consensus with your compatriots, we urge you to do so because, as is obvious, if you don't, we will. And the consensus that we arrive at may or may not approximate what you would have liked to have

had, or to use economic jargon, it may not optimize the solution in the end.

Second point is that it was pointed out to me that I wandered a little bit in my comments about the funding availability. What I intended to say earlier is that we have a known pot of money today that we have no idea will continue beyond the four years or not. That doesn't mean that the funding systems that we derive or construct cannot be developed in such a way that they'll provide some source of ongoing funding beyond the four years that can be used for assistance of different industries or for support.

We're not ruling any of that out. All I was intending to say was that as far as we know there is no additional money that's going to be forthcoming in from a new source beyond the four years. So it's not to rule out a source of funding that would be regenerative that would buy an annuity of some kind that could then cause itself to self-pay over a series of years.

None of those are off the table. In fact, considering the range of financial instruments that are out there that are just mind boggling all the way from conceptual derivatives to time tested bonds, I would say nothing is off the table.

With that, I'm going to return to our agenda and to the comments that we are entertaining right now. In the category of mechanisms for allocating funding, and I believe we will merge pretty seamlessly from the comments on that into the category of criteria for allocation.

So with that, I'm going to ask Bud Beebe to come back from SMUD who wants to talk about public goods programs.

MR. BEEBE: Commissioners, I'm Bud Beebe with the Sacramento Municipal Utility District.

I wanted to mention just some experience that we've had with a government program called a Renewable Energy Production Incentive Program. And perhaps some lessons from that program can be reflected into your program.

The REPI program as it's called was an invention of the US Congress to help municipal utilities put in a fund renewable energy projects that couldn't make it on their own in the marketplace at this time, and it would allow a municipal utility to get an additional one and a half cents per kilowatt hour for a renewable energy program that was a new project. And it was to be administered by the Department of Energy.

And everybody liked the program in the municipal

theater. Seemed like a good program, and it seemed like the right thing to do.

But what has happened is that the program funding was a year-by-year funding program, and the Department of Energy did not in fact have this as one of their highest priorities when they were developing projects. So what was set out by Congress as a program to help renewable energy projects come on line had so many caveats to it that very conservative investors would not use the REPI program as a part of their understanding of what the project could bring back monetarily for them. And so the REPI program really never helped a project come on line.

After it's on line and after it gets its nod from the DOE as an acceptable project, in fact the REPI program does bring in some money, and SMUD has earned a good deal of money for these things, but the thing I'd like to underscore is that the REPI program itself does not seem to have helped bring any renewables on line. It only acts as more or less a windfall once they're on line.

And how you allocate this, the amount of money that you have, is going to be important as to how investors and the financiers of the investors look at your projects. They have to

know what criteria and have to have a certainty that their projects will fulfill that criteria in order for new renewable energy projects to go ahead.

That's my basic git, and I appreciate those comments. I'd like to defer now to my colleague Don Osborn who'd like to discuss some things on allocation.

PRESIDING COMMISSIONER MOORE: Before you do that let me just suggest once again that anyone who does wish to address us on any of the items, sign up. We have blue cards in the back. And that you make yourself known to us on the topics that you'd like to speak on. Thank you.

Donald Osborn.

MR. OSBORN: Good afternoon. Thank you for this opportunity. I'm Don Osborn, the Supervisor of the SMUD Solar Program. And I'd like to just make a few comments on the mechanisms for this implementation of the renewables portion of 1890.

Before I proceed, I would probably be remiss, however, if I let pass the earlier comment about having to go all the way to Traver City to find a good utility model of green pricing. You don't need to go quite that far. In fact, you can visit Chuck

Imbrecht's house and see an example of green pricing right here in Sacramento.

The Sacramento Municipal Utility District has over 400 customers who are part of our PV pioneer program which is using a green fee as part of the mechanism of implementing our aggressive photovoltaic development program.

I think it's real important to take a look at the fact that we have a limited time offer here to utilize ratepayer resources to complete the commercialization of these renewable resources. And the intention, I think, is clear that we're given this limited time to complete this process with the expectation that these will then be sustainable on their own in the commercial marketplace.

So it's very important to take a look at mechanisms to develop the market and develop the long-term sustainable ability of renewables, a diverse mix of renewables, to compete in that marketplace.

It's clear that customers have as one of their top desires the ability to obtain clean renewable energy. Polls time after time show this. The reactions of our own customers here in Sacramento clearly demonstrate the desire for solar and other

clean renewables. They're demonstrating that every day.

What we need to assure is that for those renewables who are above market price, those emerging renewables which are considerably earlier on the commercialization curve, have the opportunity through a variety of market mechanisms to build production, build market, lower costs to the point that they are able to compete, as I said, on a sustainable basis in this future marketplace.

So from that perspective it's clear that one size, as said before, doesn't fit all, and that we need to try to forge a mix of options that can be used. Some resources are predicated upon power plant central station implementation. Others are very distributed in nature and may be largely customer owned property based. The mechanisms for incenting those and helping to drive those down the commercialization curve can be and should be very very different.

Your openness to be able to take consensus that we can build between the renewables and bring to you for consideration your willingness to use that as a basis of your decisions and to build upon those consensus items as a basis of your decision is very welcome. I think that we'll be able to do that. Time,

obviously, is very short for us to do that.

Finally, let me just say that permitting the various renewable industries to work together in this process and to forge consensus in a way that allows each of them to promote and employ market mechanisms that will be strongest in affecting their industry in this process I think is a very desirable way to go.

And even within a particular industry, such as PV for example, it's likely that the most effective approach will be a mix hitting key turning points within the market.

For example, one could easily foresee in a distributed generation technology, such as PV, providing some sort of manufacturing or production incentive for people who will either expand production or bring new production to California thereby helping to lower the cost of production. To buy down in the interim in a declining block way the price to the consumer through providers such as utilities, distributors, other aggregators so that the marketplace with the consumer can early on approximate that what we think the long-term market will be.

And then finally perhaps some sort of low interest loan or other non-inflationary incentive to the ultimate consumer to permit the consumer to make that purchase choice in light of all

the uncertainty of a new technology and to gain benefit from that.

These types of flexible approaches I think will serve us all very well.

PRESIDING COMMISSIONER MOORE: You're talking about a loan fund in your last remarks? A loan fund to the consumer for purchase?

MR. OSBORN: As one possible example.

PRESIDING COMMISSIONER MOORE: So you're talking about debt service for variable expense, a monthly variable expense.

MR. OSBORN: Could well be.

PRESIDING COMMISSIONER MOORE: That's the State of California at large, and that's pretty dangerous. I'm just going to put that on the table.

When you start issuing short-term bonds, short-term revenue bonds to pay ongoing expenses for anything, you got, I just want to flag that as a balloon. That's real danger. The State of California got in that bind three years ago, started to get into it, and at least we're not on that same track.

So let's just be clear that what we're likely to do here is to support stuff that is ultimately sustainable as opposed to fostering some sort of incentive that is the mimic of long-term

debt. I just want to be, dangerous debt, if you will.

MR. OSBORN: Right. That would be loans on equipment, physical equipment, itself, so that you do have some security.

PRESIDING COMMISSIONER MOORE: Okay. As opposed to a variable monthly cost of some.

MR. OSBORN: Right.

PRESIDING COMMISSIONER MOORE: Okay. You indicated that there was a possible consensus on some of the financing mechanisms that were out there, and I'm assuming that you're at work with a group right now that might be preparing some recommendations that we'll see along with cost options?

MR. OSBORN: Well, for example, the PV for U collaborative is working hard with some of the other renewable organizations to try to form consensus on some of these issues. And to form consensus within the PV community itself on the most effective approaches.

PRESIDING COMMISSIONER MOORE: Since SMUD has been offering PV alternatives, the Chairman is one participant in your program, but I'm assuming that since the program has opened there's been a variable take rate of it on the part of your consumer.

Do you have any statistics that you can offer us in later testimony that will give us an idea of what percentage of your consumer base is starting to participate at what cost level? Get a little bit of an idea of the sensitivity of this.

MR. OSBORN: Sure. We can provide that information for you.

PRESIDING COMMISSIONER MOORE: Great. And you also indicated that you were aware of some polls that have been done showing choice on the part of green options. Will you, if you have access to those polls, and again we're obviously asking everyone who comes to us to give us that kind of data, we'd sure appreciate getting it.

MR. OSBORN: We'll be glad to. We have both marketing polls that we've done within Sacramento County as well as access to information that's been done elsewhere in relation to the utility photovoltaic group nationwide, NREL and others.

PRESIDING COMMISSIONER MOORE: Great.

Commissioner Sharpless.

COMMISSIONER SHARPLESS: You also reemphasized a theme that we've been hearing from some of the speakers that have to deal with the Committee being cautioned on one size does not fit

all. And within this you've talked about some mechanisms. In light of that, can you be more specific about what mechanism, out of the mechanisms that you mentioned, which of those apply to which types of technologies?

MR. OSBORN: Not in any great detail. My specialty, of course, is photovoltaics and solar. What would be effective mechanisms for wind, geothermal, biomass, I would really hesitate to venture.

While the time is short, and we are still at the early stages of these discussions, it's very difficult to pin those down. I would say that the heat's on us to do so in the next couple of weeks so that we can provide that information to you for your consideration.

COMMISSIONER SHARPLESS: What type of analysis do you think needs to happen in the next couple of weeks to give the Committee some idea as to how these mechanisms will, in fact, make these technologies sustainable?

MR. OSBORN: Well, I think one of the key things that we really need to take a look at is differentiating between mechanisms which give, which spread the money so thinly that there's an inadequate effect through the expenditure of those

funds.

For example, we saw a chart earlier where if we divided the money up between the eligible new technologies, you're looking at something like half a cent a kilowatt hour, I would venture to say that that would have little ultimate effect on many of these technologies. If a technology is that close to full commercialization, it probably doesn't need the extra push.

So I think we need to take a look at the mechanisms, work out the calculations to see if we actually implemented this mechanism do we really get a measurable impact, and do we get an impact that's large enough to stimulate the commercialization to accelerate it enough to meet this limited window that we have.

And I was glad to see Commissioner Moore pointed out that the four-year window's on collection of funds and doesn't preclude somewhat of an extension beyond that for the implementation. But, nonetheless, we are faced, I think, with a legislative mandate to tremendously accelerate our commercialization efforts with a definite end point in the near term.

COMMISSIONER SHARPLESS: Well, I think that the analysis that you're speaking to is exactly the type of analysis

that the Committee's looking for, and I would hope that in the days that come as the parties get together and discuss these various ideas that that's the type of analysis that they have in mind to present back to the Committee.

PRESIDING COMMISSIONER MOORE: Let me just ask one follow-up question before we go onto the next topic. And that is the idea of the munis coming to the game, do you bring funds as well to supplement the funds we have?

MR. OSBORN: Oh, I think very definitely. The munis are charged with collecting of public goods funds. The expenditures of those, of course, are subject to the local control provisions of 1890.

However, the sense I have is that the munis are very interested in a collaborative process in one in which the resources we bring, the resources that you bring, are put to the best effect for the State of California and all of our customers.

Personally, I'm looking actively at mechanisms in which the smaller munis may team with some of SMUD and other larger munis in the effective expenditure of these funds for renewables, and emerging renewables in particular. And I would expect that some of the mechanisms that would be statewide through your

process would be very compatible with the allocations that we would come up with.

PRESIDING COMMISSIONER MOORE: So we could even have another category than the one that's been broadly discussed here, and that is a supplement or an incentive fund that might be directed at munis to match their funds, or vice versa, if you will, targeted to municipal areas.

MR. OSBORN: That's obviously very possible. Particularly for those projects which are implemented directly by utilities such as a central site project.

However, many of the mechanisms we've been talking about are those which might apply to developers, manufacturers or customers of those technologies. In which case, that would be pretty much statewide and would be ones in which muni efforts, I hope, would play a significant role but would be statewide mechanisms I would assume.

PRESIDING COMMISSIONER MOORE: Okay. Thank you very much.

With that, what I'm going to do is proceed as -- I'm sorry. Staff.

MR. SCHWENT: Just one brief question, Don.

One of the issues that keeps being raised is is using this money effectively and buying down the costs of these technologies, and SMUD has been in a unique position the last few years in terms of commercializing or trying to commercialize PVs with monies they have available, I just wonder if Don would just take a second and give you some sense as to what they've been able to do with the monies they have available, and what we might be able to do with the monies that are available through 1890 for some of these emerging technologies.

PRESIDING COMMISSIONER MOORE: Well, again I'm trying to stay in the rough nomenclature. I mean, I'll ask you to answer the question, but, again, I'm trying to stay roughly within the categories that we have, and I'd rather not diverge too much. See if we can sort of focus the testimony. So go ahead and answer the question.

MR. OSBORN: In fact I'll try to answer that in light of the questions before us.

We've seen in, compared to the resources available through 1890, through a rather modest program at SMUD we've been able to tremendously impact the pricing of photovoltaics. We've seen our systems fall in price in four years from roughly $10 a

watt down to about 5.35 a watt. That's still about twice as expensive as it needs to be. Somewhere in the 2.50 to $3.00 a watt range most likely for retail applications.

But I think it does show that PV, which is quite often looked at among the renewables as the high cost item somewhere out there in terms of true domestic commercial markets, is indeed making very rapid progress, is indeed capable of providing a competitive resource in this time frame, and more importantly that the amounts of monies which 1890 proposes, while very limited compared to the vast amount of renewable resource in front of us, is indeed a major lever that can effectively be used to accomplish this task.

PRESIDING COMMISSIONER MOORE: Well, isn't one of the difficulties with PV the fact that it lumps in and considered or rated on the basis of day-in day-out use or provision of electricity by any other source, gas or other fossil fueled source; but if you take it up to its niche capacity, take SMUD's facilities for instance, when you look at solar in shaving the peak off peak load in the summer that it really comes into its own, and that in that time category it is more than competitive. So there is a time element here that has to be considered as well.

MR. OSBORN: Right. Obviously there's both distributed benefits, which means the benefit changes as to where the location of the resource is on a generation system, as well as time of use, time of generation considerations as well.

PRESIDING COMMISSIONER MOORE: Thank you. Thank you very much.

With that, as I said, I'm going to try and transition now into the very closely related area of the criteria for allocation. I'm going to do two things first before we call for the testimony, and that is turn to Staff and ask Marwan to introduce the topic for us, and then I'm going to ask if anyone in the group that's addressing us today has been working towards a consensus on this item that might want to tell us what the progress is.

Marwan.

MR. MASRI: Thank you.

This area, of course, overlaps a little bit on the definitions. We've seen some parties come up this morning and talk about whether utility owned plants should be eligible or not. In my mind these kinds of questions really fall out into the criteria rather than definitions. And this is the kind of thing

that we really should be addressing.

First of all, the criteria of maximizing the effectiveness of the fund is going to be very important. We've heard a lot of people talk today, the Committee and parties, about creating a competitive industry that out lasts the availability of these funds and become self-sustaining.

To the extent that we can come up with criteria that can be operationalized, that is put into practice to steer the outcome towards that, I think it will be a welcome contribution.

For example, if we somehow can identify and focus on the most promising technologies and/or projects, if they have access to this fund, then fact will be on the path to self-sustaining growth and competitiveness. That would be a great accomplishment we can do here.

So to the extent that there are any ideas on how we can focus the effort on the most promising technologies, however we define that, or approach to self-sustaining competitiveness and growth, I think will be a worthwhile effort for us here.

The eligibility for the funds under standard offer four came up. This also, I think any comments on that would be welcome. Should projects be eligible under their fixed energy

price period, under the fixed capacity price period, and as I mentioned earlier utility owned plants. So anything that really can give the Committee a standard by which it can focus the effort on creating a competitive industry in the future would be, I think, a good contribution.

PRESIDING COMMISSIONER MOORE: Thank you, Marwan.

I might just reiterate that under our header of criteria for allocation we've asked a series of questions, and you may or may not wish to address those. Let me just, they bear repeating.

What are the appropriate weights for that ought to be given to economic performance. The current or projected market clearing prices. The value of externalities and others. Many many years of research that could be devoted to externalities, so we'll just cap it at the broadest level there. Should be dealing with life cycle costs. And any other factors in terms of appropriate weighting.

How should we assign a value to some of the non-energy benefits. Again, an externality question. And what do you think the guidance that 1890 gives us or restricts us to ought to be applied to this.

Is there anyone here who has been working with a group

that is prepared to represent some consensus of thinking on the criteria to be used?

Okay. We'll classify the consensus on this as still emergent, then.

[Laughter]

PRESIDING COMMISSIONER MOORE: All right. I've got a card that apparently came late for the last criteria on the eligibility. Let's see. Eligibility for funding. So I'll call on Jay Morse, I guess. I think that fits in.

MR. MORSE: Thank you, Commissioner.

This is, in part, a follow-up to some earlier comments. I wanted to echo some comments that we heard not only today, but also --

MS. SHAPIRO: Excuse me. Could you say your name and who you're representing and spell it. I think I can spell Morse.

MR. MORSE: I'm sorry. My name is Jay Morse, J-a-y, M-o-r-s-e. I'm with the Public Utilities Commission's Office of Ratepayer Advocates.

I wanted to start by echoing some comments that we heard not only today but at the previous meeting which I think was on October 16, and I think that Marwan just alluded to that had to do

with maximizing the benefit of the fund with respect to utility owned installations that would be covered by CTC or by performance based ratemaking perhaps. The desire to maximize the use of that fund by taking into account that those installations are covered elsewhere.

The second has to do with the distinction between activities of municipal utilities in the realm of distributed generation, such as SMUD, and the operations of investor owned utilities in those areas.

SMUD, as you know, is a public entity; it's self-regulated. The IOUs are regulated. And so a distinction comes into play when we start looking at the involvement of regulated versus unregulated entities in distributed generation.

Specifically, the restructuring process that's ongoing right now has issues before it such as the nurturing of retail competition, the separation of generation from transmission and distribution, it's called corporate unbundling, the prevention, and if necessary mitigation, of cross-subsidies between monopoly functions, such as T&D, and competitive functions, such as generation and retail service. And also the responsibility of the PUC with regard to implementing a single net metering.

All of these issues come into play in examining the question of involvement, if any, of regulated utilities in distributed generation. These are issues that are part and parcel of the overall restructuring proceeding that's now before the Public Utilities Commission. And for this reason I think it's necessary to distinguish between the activities of an entity such as SMUD in these areas and these other issues that involve broader restructuring questions that are now before us right now.

That programs such as the PV friendly pricing program of SMUD does not necessarily translate over to the realm of regulated entities where we are now trying to separate generation and customer service from transmission and distribution.

And that's the sum of my markets.

Oh, one other thing I'd like to mention is that the Office of Ratepayer Advocates right now is also involved with advocating the promotion of roof top photovoltaics and other customer location applications through assistance from the commercialization portion of energy efficiency. So that's another area we're funding may be involved.

And I'd also like to finally in comparing again programs such as the SMUD program and other programs such as single net

metering to please to bring up that one of those programs involves a connection on the utility side of the meter so that the panels, for example in the SMUD program, serve the grid. Whereas panels that would be owned by customers or retail providers that are connected through single net metering serve the customer's load and reduce the customer's bill. Those are different applications, and they have different implications for markets for electric service.

That's another example of how these distributed applications bear on broader restructuring questions.

PRESIDING COMMISSIONER MOORE: Thank you very much.

MR. MORSE: Okay.

PRESIDING COMMISSIONER MOORE: Questions? Thank you.

All right. Ryan Wiser.

MR. WISER: I pass.

PRESIDING COMMISSIONER MOORE: All right. We don't have many of those.

Nancy, I'm going to call you back to talk about criteria. Nancy Rader.

MS. RADER: Nancy Rader, American Wind Energy Association. I think I pretty well said what I wanted to say

before.

I guess I was just in response to Marwan's questions say that, well, I guess as I said before that the utilities, we think, should not be eligible for funds if their projects are eligible for above market cost recovery end of the CTC. And we think that standard offer projects should be eligible beyond their fixed energy price payment. That is after year 10 that they should be eligible. Because, indeed, we are having trouble operating under that circumstance.

PRESIDING COMMISSIONER MOORE: Yes. And a fact not unknown to us. Thank you.

Eric Miller.

MR. MILLER: Thank you. My name is Eric Miller, Chief Executive Officer of Foresight Energy Corporation.

My comments today would cover really sort of an overlap of four and five as you had mentioned. And in particular would like to suggest that as you've been hearing some from many today, the market and particularly the consumer market, the direct access market, I think offers an attractive opportunity to both help us figure out the winners and losers and also provide much more leverage to the funding that we have.

There is great demand on the part of the public, it's been alluded to many times today, and I think rather than go into a lot of detail there, I will be providing a whole series of polling information that we've collected that demonstrates that pretty consistently across the board 40 to 70 percent of the population is very prepared and very interested in purchasing renewable energy, even if it costs somewhat more than they're paying today.

We've also analyzed and will also be providing written testimony to this that those premium prices consumers are willing to pay in fact can sustain the existing industry, and I think certainly in the long term sustain the industry, very much sustain the industry in the long term.

I think it remains a bit of an open question as we all get started whether it's enough to get a bunch of new projects right away, but I think we can get close, and I'm very confident in the long term if we build the market now that we can sustain a broad array of renewable projects.

And so I believe that that's an effective vehicle for spending the funds. Because the consumer is willing to pay a bit more, it creates an additional funding vehicle. And what that

allows us to do, and particularly in creating a long-term market, it allows us to get a lot more leverage on the funds.

We've calculated that you could get approximately 25 percent or 25 to 40 percent more projects supported at the same pricing to the project if you do it through funding vehicles that use the direct, the consumer market, through CTC credits in particular. And I'll be providing some more detail on this.

We also believe, for particularly existing projects, another effective, another vehicle that really is not specifically in allocation of the 540 million, but something we would hope could be included in the final report, it would be a streamline process of buying out existing SO4 contracts through CTC credits. That a project could, at its option, exchange the CTC obligation which currently exists for CTC customer credits, which that project could then take in working with a renewable aggregator and into the marketplace and receive the value of their contracts through the customer as opposed through a generalized CTC payment.

This, I think, can be a very attractive option and may encourage a number of projects to get out into the marketplace on terms that maybe look quite a bit more favorable than might be available through direct buy outs. So we'll provide some language

on that and hope that can be part of the report, and I think can help ease the pressure on the very tight funds that we do have.

And then finally, it's critical that we do build, to accomplish our goal of building a sustainable market, I'm unaware of any long-term sustainable option besides getting to the customer and the market we're headed to, and so I think that has to be a cornerstone of, building consumer demand has to be a cornerstone of building the long-term demand for renewables.

And we have a really unique opportunity to do that during the transition period while wholesale prices are quite low. Retail prices, in fact, will probably be relatively high because of the rate cap included in 1890. And so the opportunity for renewables to compete at the retail level is actually quite good now relative to what we might see in the future. And so it provides an environment in the next four years where we can build that market, get the critical mass, build the consumer awareness and support that's needed to sustain the market. And once we get that market built it appears to be quite sustainable in the long term.

We feel that at between a five and ten percent price premium we can provide project support that's very consistent with

maintaining existing projects, and I think with a little bit of upturn in the market really either won't need much of any premium or will be able to support quite a bit of new development.

So we see this as both an allocation method in that the consumer then becomes the vehicle by which the projects can gain support. And not necessarily the exclusive vehicle. I think an important vehicle. And also becomes the criterion that we let the market, we really let the consumers decide which projects they see are meritorious.

And I think our experience so far has been the consumers are quite aware of the various options. They see the strengths and weaknesses of each one. They understand them, and they're interested in seeing a mix and a balance. And they're not interested simply in the cheapest one.

I guess I'd say in a nutshell we have a lot of faith in the consumer's ability to really sort through and figure out what's real, what the real benefits are, the technologies, and they're prepared to support those quite eagerly. And would recommend that as a quite simple allocation.

Dan's auction format I think is workable. Our major concern and my personal, having been formerly with Canatek

[phonetic] and so I can say not a survivor of the BRPU, very involved, but not surviving it, of the process questions and the ability to actually march through and get things done in a way that can allow a marketplace to develop is a real major concern. And I think there's nothing about that auction concept that is in any way in conflict with that.

But only if it is constructed in a way that the marketplace can really rely on the rules and rely on the outcomes of that process in a quite short time frame. The transition four years is not a long time. We really need to get started January 1, '98, and so we need a process that can be start and finished, including appeals, etcetera, in a matter of a few months. And I think if we could all go into it with a high degree of confidence that we were going to come out with that kind of process, then that might work.

Our recommendation until now has been more of a first come first serve, recognizing that's not the most, necessarily the most efficient allocation, but it seemed to us one that might allow the certainty into the marketplace of at least what the rules were going to be and how, what, you needed to do to be ready.

And with that, I will be filing written comments.

PRESIDING COMMISSIONER MOORE: Mr. Miller, I'm assuming you heard Dan Kirshner's comments before us this morning.

MR. MILLER: Yes.

PRESIDING COMMISSIONER MOORE: Do you see a conflict between your idea of buying out the SO4 contracts with his idea of simply ignoring them? In other words, if you have an SO4 contract, you're out.

Do you think that this is a bridge that could get you closer to the idea that he was advancing?

MR. MILLER: I see them really as separate, entirely separate mechanisms. That the buy out through a CTC, the contract, there is a value in the ongoing capacity payment of a contract, there's a value there that the project needs to retain to be willing to do anything.

We see this way of turning that value into CTC credits being another way besides taking a buy out or just living with their existing contract.

That would be a really, essentially, a private transaction between the utility with which they held the contract and the project really wouldn't enter. They would need to find a

certified supplier to go take advantage of the direct first provisions, but other than that we're really saying that it's another, it really becomes a private transaction between the utilities, and it provides a mechanism that encourages that contract to get out into the marketplace.

Once they're out there, I don't see, I think that process is separate from the allocation of the 540 million. And if they were a project that would otherwise qualify under one of the criteria of the 540, I wouldn't see that they would be in, should be in disadvantaged in obtaining, you know, funds.

I guess if someone took a credit, they ought not to be worse off than a project that stayed in its contract. That might argue they should be better off, but at least they should be no worse.

PRESIDING COMMISSIONER MOORE: But haven't you just in fact offered a bridge, if you will, a cross over to Mr. Kirshner's side? In other words, if that worked, if it was a viable auction system price based system and it had the peculiar effect of cutting off some of those folks who currently had SO4 contracts who might want to play in this game --

MR. MILLER: Oh, yes, I understand your point now. No,

I think that's exactly right. That could provide -- excellent, yes.

PRESIDING COMMISSIONER MOORE: So if we had two successful mechanisms, we might, I mean I'm just saying it's a very intriguing idea, and I know Jan and I we're both intrigued when we saw it the first time, you might have built a bridge without even intending to do that that we might be able to utilize later.

Jan.

COMMISSIONER SHARPLESS: I wanted to sort of focus on whether or not your particular type of proposal would offer same advantages to both existing and new and emerging.

In other words, what I hear you saying is that the customer is going to somehow ferret through the knowledge of reliability, life cycle costs, economic performance, and all of that, and make wise decisions. Instead, what I think that this proposal's going to do is allow marketers to go out there and look at the renewal market and put packages together to offer to their customers.

And the question then becomes if that is in fact the case, we've heard about one size doesn't fit all, will the

marketers, in competition for the customer who will just begin to understand this market, cherry pick those renewables that are most marketable to them. What happens to the others that don't somehow fall into this package?

MR. MILLER: I think first of all, you know, where that process is a sorting out of obviously the marketer is going to be the one to know the details of each project and its exact operating characteristics, etcetera, and they're going to be --

COMMISSIONER SHARPLESS: Excuse me, how's the marketer going to know that?

MR. MILLER: Well, simply knowing the, I mean, presumably the marketers are there because they have an experience base in the industry and understand the business, otherwise they're not probably going to get very far.

The key is, for the consumers, is going to be putting together a package that the consumer believes has much more desirable environment characteristics. And that is going to be on a broad aggregate level. But I'm not sure that that's not the correct way to do it in any case, because all the technologies have advantages and disadvantages, and there's a balancing process that has to go on in any event.

COMMISSIONER SHARPLESS: So you think the marketer is going to do this balancing?

MR. MILLER: I think, and that's going to balance, you know, for example, you know, wind is very low cost, but because of its intermittent nature it may have a little higher shaping requirements. Geothermal is very reliable. May not be quite as low on a cents-per-kilowatt-hour but has a very nice stable delivery pattern. Photovoltaics have tremendous end use distribution advantages and also tremendous consumer, consumers really understand the value of distributed generation and the attractiveness of it. They're very strong.

I think the SMUD program just indicates how strongly people are drawn to that. That's a program in which the consumer gets no tangible financial long-term benefit. They don't even get the energy from the PV panel. It all goes right back into the grid, and yet there's tremendous support.

And so I think what that's saying is people understand the various, they understand at a high level the advantages that all the technologies bring, and the mix that's going to be most attractive is going to be the mix that takes each technology and puts it together into an optimum portfolio that's most economic,

gets the most environmental bang for the buck. And that's going to be a mix. That's not just going to be picking the one with the lowest cents per kilowatt hour.

And so we see that that's an integrated process, and it's something we will go out to the marketplace with a package, and then consumers will then react to that. They may turn out to, you know, I'm sure we won't get it right the first time, they may turn out they want a little more of this, a little less of that; and I think that's a whole process, interactive process between us and the marketplace where we're going to evolve.

It's also going to be different consumers want different things. There's not going to be one particular package. And so there's maybe a set of people that really like wind or a set of people who really like geothermal or really like biomass. And so, you know, what's going to happen is going to be the aggregation of all of those various market interests into a package. And I guess what I see is a real diversity out there on the part of public interest that's going to create a diversity of demand for the resources.

Obviously we're going to look in each category for an attractive, you know, for the projects which are strongest and

provide the best value for the customer, and I guess I can't say that all those, you know, they'll be ones that are more desirable and less desirable. I guess I would suggest that maybe that's not an inappropriate criteria for how we look at the project's merit.

COMMISSIONER SHARPLESS: I guess it gets back a little bit to what you're using as your assumption on people having such strong opinions about renewables. Are you talking about large users or small users? Are we talking about commercial, residential? Who is it that has these really strong opinions about renewables?

MR. MILLER: I think the opinions are very strongly, are very broadly held. The economics of delivery to individual customers really point you to the smaller customers because for the residential small consumer customer the commodity energy portion of their bill is a very small, maybe 20, 25 percent of their bill. Therefore, a penny to a residential, and they also consume the total dollar, the percent of their budget or income or anything that they spend on electricity, is also relatively smaller than a large industrial, let's say.

And so for the consumer a penny a kilowatt hour is five, seven dollars a month is not for them a lot of money. When you

translate that back to what the difference in a commodity energy price, it's huge. It can be several cents a kilowatt hour. And can provide a many, you know, 100, 200 percent increase in the commodity power price you can pay for a renewable even with a five or seven percent retail price differential. So you get a lot of leverage there.

That the industrial side, they're buying almost direct, in some cases directly, off the wholesale power exchange, that 100 percent increase in price is going to be 100 percent increase in price for them, and instead of being five bucks a month, it's $500,000 a month. That becomes a little more, it takes a little more commitment. And I think, you know, I think it's unrealistic to expect; businesses will need a very clearly defined value that they gain from their customers.

And I think there will be that. I think it's going to start from the smaller sectors and work up. Just because the math of that leverage between having a small, the people for whom a small, were going to go first are the people who have the smallest commodity energy portion of their total cost. And there may be large industrials who look at that way and say I have, you know, my costs of a product are a million dollars a year and electricity

is 5,000. Sure, if I pay 7,000 or 10,000, I don't care. It gets me a lot of appeal with my customers. That may happen.

I guess we see that really working more from a bottom up process because those are going to be the people for whom the decision is the most painless.

And how far up it will get? I don't know. I think we'll certainly see some commercial customers do this over time. Particularly if the broad consumer market, if people are buying in it, you know, recycling, people started demanding their products that they buy from their businesses on recycled paper because they were recycling at home and said how, you know, why aren't you guys doing this too.

I think the same thing. It's that base demand that's going to build the sustainable marketplace.

COMMISSIONER SHARPLESS: Well, there's two things in your proposal. One, a well educated consumer group, and you're focusing on residential and small commercial and marketers who understand all of the technologies and what they can bring.

MR. MILLER: Yes. And certainly there are --

COMMISSIONER SHARPLESS: Do you think we have that now?

MR. MILLER: I think we have the beginnings of it. And

I think more will enter if we create a marketplace that has a clear ability for people to understand the rules, how it's going to work, and there's some stability to it, and they understand it's a viable opportunity, then I think we'll certainly see that's circumstances in which you have a real market, and you'll see entrants.

I think at this stage there are some, there are at least a couple of us out here who are very committed to trying to do something.

Quite frankly, the rules aren't defined yet, and a number of us are fairly out there taking a risk starting basically on the faith of those rules will get created. Once they are, if they're done well, I think you'll see a lot of interest.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER MOORE: Mr. Miller, don't we have a paradigm of the well educated consumer, or a similar circumstance of well educated consumer in the financial markets, where the consumer simply unwilling to start putting all their eggs in one basket, a wind basket, a geothermal basket, and in fact they turn to mutual funds, for instance, acting as a midway broker to go and make the choices for them. And isn't that the

most likely event for consumer choices, that these things will be brokered in a consolidated fashion spreading the resources out among a very diverse set of targets?

MR. MILLER: Absolutely. I think that's a terrific analogy. That we're kind of setting up a stock market here, and the big industrials may get either a direct license to trade on the floor or will, you know, figure out what to buy. And as you get farther out, you know, most consumers will pick mutual funds because they want to see a balance of risk. They're looking at a longer term portfolio and longer term return and managing of their risk -- I think it's exactly analogous.

PRESIDING COMMISSIONER MOORE: Let me just take that analogy one step further then and ask if you were prudent risk manager and you ran a mutual fund and that mutual fund was brokering renewable energy for marketing out to consumers who exhibited a preference or who might exhibit a preference for green energy, wouldn't you, in effect, be doing at your very localized end what we probably going to have to do up here, although there's resistance among some quarters, and that is pricing by competitive advantage or comparative advantage, if you will. That you wouldn't be buying your market basket of goods unless you could

guarantee the lowest price in that package in the bundle, if you will, for your green consumer?

MR. MILLER: Sure. Absolutely. Given the package you set out to buy, then obviously you want to buy that package at the best value. You don't necessarily set out to buy the cheapest package. And just like the mutual funds.

I think also there are, like there are more mutual funds than stocks now, there are a number of different portfolios that will emerge with different risk profiles. But I think you're exactly right that the consumer is going to want to pick among a packaged set of attributes that's hedged and managed for them. Not a lot of people are going to want to buy, you know, all their electricity from a project some place.

And I think the economics, even more than in the stock fund, will work against that, but I think also that's how people will find a lot of comfort in saying this is the overall attributes of this package.

And we see, I think what people are saying when they say we want to buy clean energy, is they're saying we want a package that has very tangible, positive environmental attributes. And large numbers of people are going to be very attracted to those

packages.

Obviously we have to hit reasonable price points for that, and we have to choose wisely; but we see the numbers pretty well, stacking up well, that we think we can do that.

PRESIDING COMMISSIONER MOORE: Well, it sounds to me like we have two separate markets emerging. One's the direct one that you're involved in right now and others that we've heard trying to scare up, if you will, those green consumers who could make a direct choice, and then the second order derivative, that is the broker, if you will, who is going to package these collectively and sell them out.

Thank you.

MR. MILLER: Yes. Thank you.

PRESIDING COMMISSIONER MOORE: Appreciate it very much.

Let me return to Dan Kirshner who said he wanted to talk to us about cost data. Dan.

MR. KIRSHNER: Thank you. So we have a second handout. This one labeled Supply Curves of Renewable Energy. And basically at this point we're just trying to get out this analysis for reaction. We want people to have a chance to review it, but I think as a basis for a way of beginning analysis of where's it

worth spending money. And especially in the question with respect to existing versus new.

We think this is a place to start is project by project. And I know there are always going to be sensitivities about data, and it doesn't have to be done project by project, but at least technology by technology.

What, how are they doing? Especially under existing contracts. And what these curves are trying to show is when the parameters of the existing standard offer contracts are taken into account, even after their fixed price period, hence, that is after they go off the so-called year-11 cliff, that the majority of existing projects appear, by as best we can tell, appear to be viable on an operating cost basis.

And these kinds of figures are interesting to show us what do we need to do to support renewable energy. How many cents per kilowatt hour. And depending on a mechanism, and I'm not proposing a mechanism for existing, depending on a mechanism that will have different ramifications from where the money goes.

And at this point I'm just hoping that people will tell me, you know, what is wrong here. All the details are available in spread sheet electronic form, and there are people reviewing

them now.

PRESIDING COMMISSIONER MOORE: Dan, you've put this out. Was it available on the back table to anyone who wanted it?

MR. KIRSHNER: Yes.

PRESIDING COMMISSIONER MOORE: And it's available. We'll post it up on our Web page as well so you can get access to it.

MR. KIRSHNER: And I have a few more copies if it didn't go around.

PRESIDING COMMISSIONER MOORE: Let me, I don't know that anyone up here has had a chance to digest it enough to ask questions at this point, so we'll take it on and I'm sure you'll be hearing.

I'm sorry. Questions from Jan.

COMMISSIONER SHARPLESS: Yes. Hardly an in-depth question but scratching at the surface type of question.

Again, is this consistent with the earlier comments that you made that basically you're looking at new and not existing? Because under your theory the existing either have SO4 contracts or they're already viable?

MR. KIRSHNER: Well, my basic take on this is if you're

really not viable, then you're willing to give up that contract. If you're not making it on that contract, what's it worth to you?

COMMISSIONER SHARPLESS: Excuse me. You lost me on the first one. If you're really not viable, you are willing to give up the contract? You wouldn't be willing.

MR. KIRSHNER: If you're dead. If your project is not viable under an existing contract.

PRESIDING COMMISSIONER MOORE: SO4 contract.

MR. KIRSHNER: An existing SO4, SO2, what have you, then, and you want to come in as new, then the simple requirement is give up that contract. If you need, I mean I'm --

COMMISSIONER SHARPLESS: And what do you get as new?

MR. KIRSHNER: You get to answer the new allocation. If you want to be called new, to me --

COMMISSIONER SHARPLESS: Oh. So are you using a different definition of new? Being built after, well, I don't know what the definition is going to be, but let's, since we have one out there that the Staff has proposed to start service after January 1, on or after January 1, 1998, is that the definition of new you're using?

MR. KIRSHNER: Yes. Although where the issue hits home

here is that a project may be new under the Staff's definition, that is effectively rebuilt, and still hold onto an existing standard offer contract. This is possible. It is likely.

COMMISSIONER SHARPLESS: Under Staff's definition?

MR. KIRSHNER: Under Staff's definition.

COMMISSIONER SHARPLESS: But that doesn't address whether or not they would be eligible for 1890 funding. It just describes a definition. It doesn't describe what we're talking about, which is allocation criteria, allocation eligibility. It is a definition.

MR. KIRSHNER: All right. Okay, maybe I'm jumping a step ahead and saying that definition coupled with, you know, taken by itself and all we're looking at is something that says new versus existing, but if there's an additional criteria that says new does not hold a standard offer contract, sure, then I have no problem.

COMMISSIONER SHARPLESS: Okay. So back to my question. Do you remember it?

MR. KIRSHNER: Well, what this is really aimed at is is it 60/40 or is it 40/60 or is it 50/50? This is the question. We have at least 40 percent of the funds to go to existing, at least

40 percent to go to new, that leaves 20 percent to fight about.

In our earlier comments at the En Banc Hearing on the 16th, what we said is we're hoping that there will be some objective criteria, environmental bang for your buck, or whatever bang for your buck, to make some decision about that 20 percent in the middle. And I think part of that has to be is how much money in addition to existing contracts do existing facilities need.

I'm certainly willing to be persuaded about it, but I'm just putting this out as a method of looking at it. And that is a question that should be asked.

COMMISSIONER SHARPLESS: So your method is directed at 20, not at 40/40.

MR. KIRSHNER: Yes.

COMMISSIONER SHARPLESS: Your method is directed at the additional 20 that hasn't been designated, not at the 40/40.

MR. KIRSHNER: Not at the 40 on either side, that's correct.

COMMISSIONER SHARPLESS: Aren't there some questions on the 40 on either side? Excuse my ignorance, but --. About how you allocate the 40 on the existing and how you allocate the 40 on the new and emerging?

MR. KIRSHNER: Certainly. And what I said this morning is aimed at the 40 on the new side.

COMMISSIONER SHARPLESS: On the new side. Okay.

Does your supply curves require -- I notice that in areas where you didn't have specific information you averaged in order to come up with some of the assumptions for your cost curve?

MR. KIRSHNER: That would be a polite term, yes.

COMMISSIONER SHARPLESS: Oh. A rough guess estimate? More close? I think this requires some digestion here, Commissioner Moore, for me to go any further.

PRESIDING COMMISSIONER MOORE: Thank you, Mr. Kirshner.

MR. KIRSHNER: Thank you.

PRESIDING COMMISSIONER MOORE: And I'll get back to you, Nancy, in a moment.

Michael Theroux, I call you back.

MR. THEROUX: Thank you again. Michael Theroux representing Sierra Economic Development District.

As you're aware from my prior comments, our work was directed specifically toward the rural utilization biomass in the Tahoe Region. And speaking to that point, I think that there is a pattern we see emerge that I can share a conclusion on and then

state a recommendation.

Regarding trying to maintain a credibility, if you will, to your criteria for allocation of funds, I suggest that we look to the sustainable nature of resources that need to be renewed, in this case the biomass, where an attention is needed for the entire flow from the production of that resource, that renewable resource, all the way to the end market. And that when you find a weak link, if you can look at the process closely enough you find a weak link, it may well be very early in the process.

In the case of the extraction of biomass and the supply to the energy market we found in our region that that weakest link was in the release of the biomass to the first processor. The funding was sufficient to go from processor to end market, but the funding was not, the economics of flow, was not sufficient to pull that funding back to the removal of the resource in the first place.

I would like to recommend to the Commission then that funds be allocated that pay attention to the entire flow, from the release of the resource to the end market, to ensure that that resource remains renewable. There is a specific pool of resources that we draw from, and if we cannot ensure that that pool remains

renewable, then we've just taken care the definition of renewable energy specifically.

Thank you.

PRESIDING COMMISSIONER MOORE: Thank you very much. Point well taken.

All right, Nancy, you actually are -- tell you what, if you can wait just a moment what I want to do is we're pretty much through the Item 4, the criteria. And in order to keep this going, because we've got something else we want to do at the end of the day involving everyone in a little bit of participation here, let me transition to the last category, get it on the table, and I'll turn to Nancy who wanted to speak on that as well. And then we'll start talking about the next steps here in this process.

So with that, let me just transition up to the allocation process itself, turn to Marwan and ask for some Staff comments, and then we'll open the floor back up again.

Marwan.

MR. MASRI: Thank you. I think this is more of coordination issues are discussed or should be discussed under this category. For example, the two funds that are created in AB

1890, one is through voluntary contributions by customers to renewables are to go to a fund to be specified by the CPUC.

And the other one is, as Don Osborn mentioned earlier, the munis are to collect, also, surcharge money, although not specifically the amount or the share of that specifically earmarked for renewables not defined. Whatever that turns out to be, it's timing and amount will impact how the money is allocated from this fund as well.

Again, for the idea that if all sources are coordinated, then the effectiveness of all those sources together will be maximized.

And, of course, any comments on who should be doing the allocation and anything about the review process and whether a time period for allocation is going to be annual, biennial, so on, and also whether the allocation can extend beyond the four years in which the money is collected is another aspect of this timing.

And we think for new and emerging technologies it is important that the allocation be extended beyond the four years that the money is collected if it's to be effective for those categories.

And that's the end of my remarks.

PRESIDING COMMISSIONER MOORE: With that, as you can see, we basically have all of the allocation, the allocation mechanisms, the criteria, the mechanisms themselves and the process on the table.

So with that, I'm going to reopen the floor, ask Nancy Rader to lead off with her comments, and then we'll take some of the other folks that have signed up.

MS. RADER: Nancy Rader, American Wind Energy Association. I actually just wanted to respond to the supply curves that Dan Kirshner put out.

We will be providing you with a detailed critique of those supply curves. But I just wanted to give you a brief preview of what that will be. And I will get that to you.

PRESIDING COMMISSIONER MOORE: Why, they're wrong, you mean?

MS. RADER: Yes. I first have to say that to my knowledge no one in the wind industry was contacted for data for this analysis, and we are unclear as to the basis of those numbers. In fact, I never got the analysis until today directly. I got it indirectly, which allowed us to do the critique.

But just to summarize, to make an analogy, the cost

that’s presented for wind in that report are equivalent to saying that the costs of operating an automobile is the price of gasoline, or the cost of gasoline, and not taking into account insurance, tune-ups, repairs, all those other things that cost us money to operate our car. In essence, there’s no mention of the cost of unavoidable expenses such as property tax, easement payments, insurance and general and administrative. And that’s not even to mention major capital repairs.

PRESIDING COMMISSIONER MOORE: Okay. In other words I’m to understand we will get a critique from you.

MS. RADER: Yes, you will.

PRESIDING COMMISSIONER MOORE: This wasn’t it, but we will get it.

MS. RADER: This is a preview, and you’ll get the full thing.

PRESIDING COMMISSIONER MOORE: I love previews. That’s the only reason I go to the movie theaters anymore is to get the previews.

Now, I have you down on the card set here as wanting to talk about the process as well.

MS. RADER: I’m going to hold on that.

PRESIDING COMMISSIONER MOORE: Can't hold too long.

MS. RADER: Okay.

PRESIDING COMMISSIONER MOORE: Is it a good one? Is it a bad one?

MS. RADER: I don't have, I don't know, I don't have a whole lot to say at this particular point, so unless I want to, I'll raise my hand later.

PRESIDING COMMISSIONER MOORE: Okay. Well, let me open that up broadly because one of the things that we are concerned about is whether or not the process that we go through should be reiterative, should it establish a set of criteria that are good for a two-year period, we go back and we retest it, you know, at some point when we got enough data to understand whether we did it right the first time, whether it was efficient the first time or not, whether we ought to be the body to do it or should this go back to the Legislature?

So let me open the floor and ask. The only cards that I have left are very general cards, and I'll call on them last where they didn't indicate a topic. So if you've got some concerns you'd like to tell us about the process itself, the allocation process, then we'd like to hear about them.

No. Okay. Well, we're just going to do this then. Bob Judd, come on forward. Very informal.

MR. JUDD: Mr. Chair, would you entertain one comment about the allocation criteria?

PRESIDING COMMISSIONER MOORE: Sure, of course. Of course. We're here to learn from you. We're not in the debate mode yet. We're just here to find out what there is to find out.

MR. JUDD: Okay. I'm sorry I failed to note it on my card.

I would say, also, just so you know that the biomass industry is reviewing a draft of the supply curve paper that is passed out to you, and we'll also have specific comments in response to that in writing to you at some point here rather soon.

With regard to the allocation criteria I'd like to offer a few suggestions that may be useful in this process. First and most obvious is to look at the language of 1890 itself. Monies collected held for the purpose of supporting the operation of existing and new, further emphasis supporting the operation of existing which exhibit a certain set of characteristics that apply to our industry, ensure retention.

You find words like that. So the language is

instructive in that in the bill itself, to some extent.

In terms of criteria, we would answer the question that Marwan raised quite succinctly. No allocation of these funds for projects that are still under SO4 fixed price contracts, period. We would suggest some other criteria that you consider. No allocation of funds or a reduced allocation of funds to projects or technologies that have other sources of support. And that may refer to the case of the utility owned renewables as well as to other circumstances perhaps.

COMMISSIONER SHARPLESS: When you say "no other funding source," does that include banks? Because that would about eliminate everybody.

MR. JUDD: Banks are excluded from it.

PRESIDING COMMISSIONER MOORE: Banks have been on a loan basis, line of credit.

COMMISSIONER SHARPLESS: Okay. You mean some form of public funding?

MR. JUDD: Some form of public funding, right. Not private financing.

COMMISSIONER SHARPLESS: Okay, not private finance. Would that include tax rebates?

MR. JUDD: It would, and I'll come to that in just a moment.

COMMISSIONER SHARPLESS: Okay.

MR. JUDD: Another criteria we would suggest is no windfall profits. And I would like to suggest that my understanding of the recent legislative process tells me that the Legislature would not have been, would not have allocated ratepayer dollars that would simply be converted to excess profits by renewable generators. These are transition dollars for renewables that need them to get to an assumed market price by 2002.

Needs will vary among the technologies, and some technologies may have no need. So I would underline "no windfall profits" as a possible criteria.

Flowing from that, you might want to consider that each technology must demonstrate, generically, not on a project-by-project micro management basis, but demonstrate the components of costs within its industry that lead it to request funding from this pool of money. We are preparing such a profile of our industry for you. We would encourage others to do.

PRESIDING COMMISSIONER MOORE: I'm not sure what that

means. Can you tell me what that means?

MR. JUDD: Well, when you break down your costs, in our case, to operation and maintenance costs, debt service, purchase of fuel and all of that, it takes you to a certain level.

As you know, in the case of biomass, the fuel component is particularly troublesome for us because we deal with solid fuel, but I think that generically and a range of different size plants we can give you a sense of where the elements of our costs are that will show why our technology is above a presumed market price at some point in the future. And within that then what steps might be taken to bring us closer to market price, in our case that is bringing the fuel costs down to as close to zero as we can, that is what will make us competitive.

So for example, Commissioner Moore, let me give you an example. Presume a market price in the future of three and a half cents, four cents. You got a project not specific to a technology that gets two cents off of SRAC, that's what they get now, and they get a two and a half cent capacity payment. So they have four and a half cents per kilowatt hour that they generate. The market price is four cents. Would they need any support from this pool of transitional dollars if they're already selling below

market?

That's the point I make.

PRESIDING COMMISSIONER MOORE: Point made.

MR. JUDD: What are the indicators of need? Well, you can't do it specifically, and obviously you can't get Arthur Anderson to go into a full order of each of these, but there are some indicators. Plant closures. In our industry we've had 14 plants go down since the blue book came out. Some attributable to the destabilization that this process has brought about.

The wind industry, I understand, has had declining output from a number of its plants. Solar thermal may have had some difficulty on default of loans. Maybe other technologies have this. So there are indicators of areas where there may be certain need.

We'd also suggest that you consider a matrix of criteria, and they vary, but they've all had value. In fact, they're all quantifiable. Such issues as, and this gets to some of the externalities, air quality and waste management, system reliability, which many of the renewables offer, peak power benefits, which some of the renewables offer, employment tax subsidies, for example.

If there are technologies within the renewables group that receive ongoing tax subsidies now, should that tax subsidy be deducted in order to level the playing field so you can make equal judgments about all technologies, including those that don't get tax subsidies?

I'll give you an example, and it may help. I understand that the landfill gas industry, and I believe they have a representative here, and correct me if I'm wrong, but they get what's called a Section 29 subsidy which is 1.005 cents per kilowatt hour subsidy from the federal government for the landfill gas they produce. If they were to take a subsidy from this fund, it's my understanding that they would have to turn back the money or turn down the money from the federal government.

So we'd be supplanting federal money that's currently available to replace it with state dollars that may otherwise have been used.

COMMISSIONER SHARPLESS: How long is the tax subsidy for?

MR. JUDD: Commissioner, I am not sure. Ten years?

COMMISSIONER SHARPLESS: Ten versus four, or some extended period.

MR. JUDD: Something in that range. Some of our technologies have received investment tax credits in the past. Some of our technologies receive production tax credits now. They have to be calculated into the mix of what the real needs of each of the industries are as calculations for allocation are made.

So those four criteria that I mentioned, you may want to consider a matrix that essentially reminds me of the magazine on the plane up here where it's Microsoft versus Netscape. And they got a chart, and Microsoft has red check marks and everyone and Netscape is missing a few here and there.

I think you could do a matrix that looks at the variety of benefits and subsidies and other things for each of the technology groups and perhaps even use that as a basis in large part for evaluation of externalities.

We're doing that evaluation of externalities for our industry, and we'll certainly pass that on to you. Others have benefits that we may not have that would be useful in your considerations as well.

PRESIDING COMMISSIONER MOORE: Good. Thank you for clarifying that.

I'm going to turn to, I have three other names that I'd

like to address. And I will apologize. It looks to me by the card that Mr. Singh, Kirpal Singh, that we probably should have asked you to speak during the definitions portion of this. I'm not quite sure where to put your comments, so I'll just tell you that --

MR. SINGH: Mr. Chairman, name is Kirpal Singh. I do not represent any dues-paying entity. I'm an independent consultant. I do have a number of associates that work with me.

I've been spending a little over six years in trying to put together a waste to energy facility. Due to EPA requirements in California and public process, we have elected to put it in Arizona. Although we are proposing to buy pickup surplus tires out of California and some solid waste. We were originally planning selling electricity back to California. This 1890 seems to have posed another roadblock.

I'd like to request to put the tires, surplus tires, as the renewable energy source under this program in Arizona. Now, I don't know how it will sit with the Legislature to bring the energy generated in Arizona back to California. But that's my basically question here.

The tires will be picked up in California, taken out and

energy brought back. And all other things being equal, this is the biggest roadblock I have. The 1890.

I did hear a new item today. I guess one of my professors was lax in educating me. I thought there was only two kinds of electricity. AC and DC. Today I learned we have a blended electricity. I thought the only blended thing you bought was scotch at the liquor store.

[Laughter]

MR. SINGH: Maybe you wish to define that someday.

PRESIDING COMMISSIONER MOORE: Well taken, and at this hour of the day your remarks couldn't be better delivered. It's that state, the wearing factor, and so I won't go any further with that.

Okay. I appreciate your comments. Thank you very much, sir.

Drake Johnson.

MR. JOHNSON: Pass.

PRESIDING COMMISSIONER MOORE: Pass. First time in history. And Robin Walther.

MS. WALTHER: Pass.

PRESIDING COMMISSIONER MOORE: Pass. Well. All right.

COMMISSIONER SHARPLESS: Commissioner Moore.

PRESIDING COMMISSIONER MOORE: I'm sorry.

COMMISSIONER SHARPLESS: Can I take that as that these people have a consensus going?

PRESIDING COMMISSIONER MOORE: Well, we're going to explore that here in just a second. You don't have to bring us your blue card. Just come on up.

COMMISSIONER SHARPLESS: I don't know what pass means. Too intimidated to speak?

PRESIDING COMMISSIONER MOORE: It's an internal company consensus of some kind, and they're probably embargoed from telling us what it is in the new world. Have you taken over a new company this week?

[Laughter]

PRESIDING COMMISSIONER MOORE: Just checking. You know, you leave for a couple of days, and you come back and find out the whole place, everything except the Energy Commission is restructured. What am I saying? Yes. Yes, sir.

MR. KRAGE: I'm Chet Krage, that's K-r-a-g-e, with Thermo Ecotek Corporation, and we own and operate 100 megawatts of renewable in this state.

I'm sorry I wasn't here at the outset in the morning, but I did want to add a few comments to what's already been said regarding the allocation criteria.

And that is that I believe if we go back to the objectives of what the Legislature set out to do here was really to sustain the level of renewable generation that has already been brought into existence by California's past policies and actions. And, if possible, to grow on to that level.

And so I come back to a lot of the statements that were made about let's optimize the use of these funds. I think what it really comes down to, and I want to put a further detailed definition on optimization, and that is kilowatt hours generated by renewables. That I think that really is the bottom line because every time one of us generates a kilowatt, you know, that is the benefit of the renewable. If we're not generating, there is not that benefit of displacing fossil fuels, the other environmental externalities and so forth.

So then I move from that point and say that the differentiation between existing, emerging and new becomes a whole lot less more important because overall what we're trying to do is to keep into existence and grow the number of kilowatt hours

generated by renewable in the state.

Okay. So that a lot of the concern about how do we distinguish between new and existing I think is diminished when we look at our primary objective is to have the most kilowatt hours generated.

PRESIDING COMMISSIONER MOORE: So you're not differentiating in your remarks right now between the price effect or the efficiency effect. You're talking about, if I hear you correctly, a quantity effect, the very fact that you're able to compete, get your kilowatt hours into the grid, is in and of itself a reason to be, and a reason for us to protect that resource.

MR. KRAGE: I think if you look at the four primary technologies that have been brought into existence, solar, geothermal, wind, biomass, in the last 15 years of state policy and practice, I think that as individual industries none of those four deserve to be abandoned. And I really believe that it would not pass the test of reasonableness to abandon or strain that investment only to build a like kind facility that, by our definition, we would call new that would yield essentially the same benefit of what was already there.

The second point I would like to make is that while, or re-emphasize, and that is that while we're talking about a group called renewables, yet within the renewables there is diversity. And there is value to maintaining much of that diversity. And I'm not saying absolutely every bit of it because, again, some of that needs to stand a test of future viability.

But each of the renewables that are in existence today have some distinguishing characteristics that they are different from the other renewables, and when you look at a state's total portfolio of energy sources and the value of diversity in a portfolio mix, I think there is reason to look at attempting to preserve each of the four that exists today.

PRESIDING COMMISSIONER MOORE: You know every one of us has had trouble trying to define the term or the sense "diversity" and what it brings to the table. Can you offer us a definition that would help or an opinion that would help us utilize the term "diverse"? I'll link it to diverse portfolio. That's a term that gets used a lot.

MR. KRAGE: Well, I think first of all I think it's a characteristic of all renewables that again we're going to insulate consumers from the rise and fall of prices in the fossil

fuel.

But then you look at a couple of the renewables as they're operated right now. Geo and biomass are essentially base loaded very reliable units, okay. Others like solar can provide very necessary peaking. Some require very high capital investment but very low operating costs. Others, it's the other way around.

And so when you look at protecting a consumer with a variety of energy sources, I think we really need to look beyond just the renewable category and look what's in that mix of renewables.

PRESIDING COMMISSIONER MOORE: Thank you.

MR. KRAGE: Thank you.

PRESIDING COMMISSIONER MOORE: Jan.

COMMISSIONER SHARPLESS: Yes, I'd like to ask a question about sustaining the level of renewable generation. That would seem to be the principle or the objective that you are offering to the Committee. How does that fall within the context of what 1890 has established as a market based customer oriented process to have a sustainable renewable industry? How do you see those two complimenting one another?

MR. KRAGE: I see that if it were not for the

uncertainty in this transition period which had started already several years ago primarily with the issuance of the blue book that renewables would have been much further along today than without that, okay. Because there would be more certainty in terms of financing a project in terms of what the future of a project would hold. And I think until we truly get to a competitive market where market power is not able to be exerted by anyone, that it's going to be difficult for renewables to really compete.

COMMISSIONER SHARPLESS: So further along would mean closer to competing at a market price, and the market power issue is that you believe that there needs to be some, use this money that 1890 has provided to continue the renewable market at the existing or bring it back to its highest level.

MR. KRAGE: Right.

COMMISSIONER SHARPLESS: And four years from now what happens?

MR. KRAGE: Well, first of all what overall industry deregulation is expecting to happen is that we will reach a competitive generation market where there is not market power present. Okay. Which right now most of us are subject to

significant market power when you look at how SRAC is determined in that energy price that we have to exist on.

COMMISSIONER SHARPLESS: But I still don't understand. I mean tell me what happens in four years.

MR. KRAGE: That we will have a market price for energy. Most of us believe that that's going to be significantly higher than the SRAC that we have today.

COMMISSIONER SHARPLESS: So basically whatever it takes to keep the existing industry at the current level is what you're suggesting this Committee ought to consider, and in four years the market will establish a price that you think most of the industry will be able to compete with.

MR. KRAGE: I would not agree with one thing that you said, "Do whatever it takes." I mean the limits are with what has been laid out in AB 1890. Now that may not be able to sustain the level of renewable kilowatt hours that had been brought into existence.

COMMISSIONER SHARPLESS: Reiterate what those are for me.

MR. KRAGE: The size of the funding being $540 million, the collection of that. The setting up of green marketing, CTC

credits and some of those things. Most of those mechanisms still have to be worked out, but they're limitations in terms of how much support or how much assistance can be given.

And I think all of us here recognize that it's probably going to fall short of what we think is needed. And so we probably won't be able to support that full level of kilowatt hours that had once been in existence, but that ought to be our target.

COMMISSIONER SHARPLESS: Okay. Thank you.

MR. ALVAREZ: I guess that gets me to the question who determines what that level of kilowatt hours is that should be in the system. I mean historically that was determined as part of the resource planning activities under a regulated system. As we transition to a competitive market you won't have a regulated system making that decision.

MR. KRAGE: That's right.

MR. ALVAREZ: Unless it's the marketplace will be making that decision.

MR. KRAGE: That's right.

MR. ALVAREZ: And what I hear you asking is whether we're going to question the results the market provides. In terms

of the quantities of kilowatt hours from renewables.

MR. KRAGE: I think what we're talking about here is the four years that gets us over into that period. That's what I'm addressing.

MR. ALVAREZ: Okay. So I guess that leaves me once we get past that transition period, you accept the result that certain renewables will not be competitive under a new market structure.

MR. KRAGE: They may not be.

MR. ALVAREZ: And that's an acceptable outcome to you.

MR. KRAGE: Um-hum.

MR. ALVAREZ: Okay. Thank you.

PRESIDING COMMISSIONER MOORE: Let me just follow on that one last question. That is a number of people are betting on the SRAC relationship out past the transition period and betting that those prices will clear at higher than they are currently.

MR. KRAGE: Yes.

PRESIDING COMMISSIONER MOORE: What if that bet's wrong? And what if it's wrong significantly? Let's say that for reasons unknown to us today that market clearing price doesn't go up by a significant factor for another two years, do you think the

industries could survive without an assist from this fund for another two years betting that it might fall, I'm sorry, rise, at two years out?

MR. KRAGE: I think we would lose more of the industry. Probably not all of it. Again, it depends on an individual's project outlook. If they can accept some short-term losses, betting on the longer term as opposed to other ownerships cannot do that.

PRESIDING COMMISSIONER MOORE: Okay. Thank you.

We're going to end up taking a break in just a moment. Before we do, let me ask Staff has put forward a couple of questions that I think are worthy to put out to the floor because we'd certainly like to know what they are.

And that is the first if there are stakeholders out there who are collaborating on an allocation mechanism or definitions, etcetera, would you identify yourself so we at least know who the players are that are trying to form a consensus so that you tell one of our advisors or Marwan who you are and what you're trying to accomplish.

And second, at the next workshop, whether it be tomorrow or the one that Jan will chair on the 12th, if there is a

consensus that is looming at that point on any given item, would you please let Jan's office know so that she is aware of it as she conducts that hearing.

And one second before we go out. We're going to do something a little bit different at the end of the day here. I told you that this is an informal workshop, and we're in the business of trying to get smart as fast as we can. We'd like to ask a couple of the participants who have been with us today to come back up after the break and join us in what will amount to a round table discussion where we can participate fairly openly.

There's no intent to discriminate against anyone. This is pretty much the luck of the draw and will involve some, if they accept, will involve some of the folks that we have heard the most from. Doesn't mean that there are other opinions that we want to exclude. Just that we'd like to get a kind of a lively interactive dialogue going.

We'd like to have, if we can, Mr. Kirshner, Ms. Rader, Mr. Miller, Steve Kelly, join our Staff up at the table afterwards, after the break, and discuss a couple of questions that we'd like to put to the group. And ask for a focused discussion on that and see if we might get some interesting

results that would help us learn from it.

So if that's acceptable to those folks that we've named, and we'd like to ask them to come forward. Mr. Kelly, and then we're going to take a break.

MR. KELLY: Yes, Steven Kelly on behalf of the Independent Energy Producers.

In response to your question about whether there is the likelihood for emerging or any consensual developments happening, I think there is good possibility that there will be some ideas put forth by the full range of renewable technology developers in terms of some of the issues that we've raised today.

There have been discussions that have been going on and they're ongoing today. And we hope that they will be fruitful and we will be able to bring something back to you as quickly as possible.

PRESIDING COMMISSIONER MOORE: Good. I might just add that although it would be inappropriate for the Commissioners to be involved in any of those, if there are services that our principal advisors can bring to the table, we'll gladly volunteer them.

MR. KELLY: We appreciate the offer. I don't think you

want to get involved in that.

PRESIDING COMMISSIONER MOORE: I'll be leaving on this side of the stage, I can see that, after this. But our offices are, of course, more than willing to cooperate in this effort. Thanks.

We're going to break until twenty after.

[Recess]

PRESIDING COMMISSIONER MOORE: We've done something a little bit unusual in the act of asking some of our participants today to participate in a panel, and I want to make one addition. An oversight, which accounts for me not being able to read my own writing, is that I've asked Bob Judd to sit on the panel as well. And apologize to him for not announcing his name when I read the list.

Now, again to reiterate, we've got an informal discussion going. We're trying to get as smart as we can and to explore this, and all of you represent, everyone in this room probably represents at least some edge of an idea, some sense that there's not totally unanimity on any given stance or policy here. Which gives us an advantage to be able to look at and debate a little bit about some of the major things that have come up.

And one of those is an idea that pretty clearly cleaves down the middle of what we've been hearing today and what we've been hearing in Staff comments, and that is an idea that was advanced for discussion purposes only, and I have a feeling that it did exactly what it was supposed to do, which is to get everyone kind of excited and starting to debate. I haven't seen Nancy jump up that fast to answer a point. It was, I mean, you know, it's exciting ideas often do that.

But Mr. Kirshner has advanced the idea of a price driven allocation system; and Ms. Rader has advanced an idea, at least part of an idea earlier, that talked about categorical spreads and allocation by category with sub-categorical, if you will, distribution being accomplished by industry participants.

Layered on top of that was an idea that I suggested might be a bridge advanced by Eric Miller about the standard offer four contracts. Standard offer four contracts get in the way of a lot of what we're trying to do. Similarly, that you can at least make the case that the CTCs get in the way of a lot of what we're trying to do.

So since we've got a lot of competing interests and since the legislation didn't solve all those competing interests,

why don't we just start from a clean sheet and see if we can find out if there's any merit to a melding of these two seemingly opposite ideas of the price driven allocation system and the categorical spread system.

So with that, what I'd like to do is, and I'll defer to comments from my colleague, but I think we'd mostly just like to listen to some of your viewpoints about what's good and what's bad about the systems, and what makes sense. See if we can find some common ground here. Mini consensus, if you will.

So with that, what I'm going to do, unfairly, of course, what else is new, is to ask for the topic to go on the table with a comment from Mr. Kelly.

MR. KELLY: My first reaction is that it's critical that whatever mechanism is put forward out of this process and comes out of the Legislature, if that's the case, that it be implementable by 01/01/98. And this is one of the reasons why I've indicated that what we probably need is something relatively simple and unobtrusive in order to accomplish that goal.

Whether or not the auction method that Mr. Kirshner's put forward is the best method or not, I'm unprepared to take that step, but I would be concerned that any measure that we move

forward on is something that we know can be in place by 01/01/98 so that it benefits the industry and facilitates the market structures that we're trying to develop here.

If it gets into a complicated bidding structure with the potential for appeals, we've gone that route. It was unsuccessful, and it's not a direction that I think that anybody at the table would welcome.

Again, we are faced with a deadline of 01/01/98 of starting to move into the transition period. And at the end of that we are coming out and hopefully having a market structure in which we compete. And that means not necessarily competing at the market clearing price, whatever that's going to be, it means competing in the market for the products and services that you have.

And as you've heard today there's been a lot of discussion that each of the renewables and the renewables in general have unique products and services to offer the public, we believe, if we can access them and get to them. So what we need is that linkage there into the market, and it can't be one that is so cumbersome and so difficult to implement that we get hung up on the administration of it.

PRESIDING COMMISSIONER MOORE: In the presence of an auction system, though, isn't precluded by a free market. In other words, you can have one coexistent with the other.

MR. KELLY: That's true. I don't disagree. It depends on the mechanism of the auction, it depends on how it's structured, and from my perspective the big concern is how long does it take to structure it.

PRESIDING COMMISSIONER MOORE: And how long would it take to build such a market. Nancy, do you think a market could be built like that that would satisfy the sub-criteria of your group?

MS. RADER: Yes. I think the allocation of funds really depends the existing versus new. I think that for the purposes of existing we do need to get the money flowing. Because what's happening in our industry is that we're seeing cutbacks in O&M staff, deferred maintenance, which means servants are going off line gradually and they're being sort of cannibalized to, you know, for their parts, and we're seeing curtailments during the winter.

I mean our industry is just not getting a living wage, and so we need to get the funds flowing to maintain our projects

while the green markets develop, while we go through the transition and see what the price is on the other side, and while perhaps long-term policy's being developed at the national level.

So for existing projects I think it's important to get the money flowing. But in terms of developing green markets I think that there's a lot of ways to develop green markets, and we shouldn't only think about the expenditure of funds for new projects as the way to develop green markets.

I think that what we should focus on in terms of a public strategy for promoting green marketing is to focus on the transaction costs that are going to be associated with finding those $7.00 a month consumers that aren't talked about. It's going to be very expensive to find those customers to educate them, to give them a confidence in the renewable energy market. That is they need to know what they're buying.

Just because you're an environmentalist doesn't mean you want to be ripped off as a consumer. And I've certainly seen that in my own purchasing decisions. I sometimes see that somebody wants to take advantage of me for my environmental spirit by charging me too much for something. And I don't want to buy a product if I'm being ripped off.

So I think that there's a lot that can be done in the transition period through the certification of renewables through a public education programs to explain to consumers what they should be looking for. Perhaps to use the utility bills as a vehicle for doing some of that education to defray the costs, and perhaps to educate consumers about the existence of green marketers through that utility bill.

I think the provision in AB 1890 that talks about giving consumers the opportunity, or requires utilities to give the consumers opportunity to fund renewables, we shouldn't just think about that in terms of a check-off type or whatever that might be, but we should think about it in terms of perhaps a bill insert that would inform consumers about their ability to purchase renewables and what are renewables and what should they look for when somebody's trying to sell them renewables.

I think those things in the four years can really help to develop the green markets for 2002 and earlier.

PRESIDING COMMISSIONER MOORE: Bob, is there any problem with trying to get your industry to bid into the kind of pricing market or the auction market that Steve and Dan have talked about, outlined here, and can you communicate in that

market some of the intangible values of the product that you're providing?

MR. JUDD: You gave me both the question and the answer to the question there. The difficulty with auctions like that, excepting for the moment what Dan said that his focus is only for new projects, is that an auction like that has no mechanism for valuing externalities. And for the biomass industry it is the economics that make the special case for the industry given its particular fuel needs.

So unless the auction is technology specific, that is a set asides by technology that would go up for auction, it has offers little for the existing biomass plants.

To follow on Nancy's comments and just so you know, the biomass industry is very supportive of green marketing efforts. We are willing to see money allocated out of the pool for that. Each technology ought to chip into it. It works best for new projects.

The difficulty with green marketing with existing projects is most of them are still on standard offer contracts, essentially sole source contracts with the utilities during this transition period. But to experiment with green marketing in a

very professional way, as someone mentioned to me in the hall earlier much in the way the billboard program for California cheese or the California Milk Commission has done, it's been very effective.

It should be professionally done. There are professional firms that do this. There should be oversight by industry reps and by agency representatives for it. But if we're going to do green marketing, let's do it with the people who are marketing experts, and let's dedicate some of these monies to a selected market pilot in the shorter run. It may cost three million dollars. It may cost four million dollars to do it, but that's planting the garden of the future as far as we're concerned, and we're fully interested in seeing that for new projects.

PRESIDING COMMISSIONER MOORE: Okay. Dan, did Eric build any kind of bridge to your concept with his idea for buying out the standard offer four contracts with CTCs?

MR. KIRSHNER: Sure, that works. I agree with him that I see it as a separate issue. I mean the issue of buy outs is a bigger, much bigger issue, but that as a mechanism, they do fit together.

Do we solve a problem -- I mean I sense, you know, optimism on your part, and to be a little mean here you just haven't been here long enough, or, you know, we know each other all too well here and consensus is always just around the corner.

I don't see a simple solution between existing and new, that is some mechanism that will push all these together and have an economic solution. My own view of it is that standard offer contracts shouldn't get additional support. The Legislature has a different view. Forty percent of the money can go to existing projects on standard offer contracts.

That said, I think, at least 40 percent of the money, so that said I just don't see a way to put all that together in an economically rational scheme.

PRESIDING COMMISSIONER MOORE: Well, and let me ask Eric then. If we create markets, if we pursued any kind of a market-driven solution here and we create a market that's focused on new versus a separate market that's focused on emerging or old or existing technology, have we unnecessarily complicated the effort so much that green marketing won't be a success? Do we preclude the ability to do that just by confusion for the consumer?

MR. MILLER: Oh, I don't think necessarily. I think that the key is that whatever you do be clear and be able to implement it rapidly. I think having there be more than one mechanism, you know, as long as it's a few and not 20, is probably not, you know, I think certainly the aggregators will be able to come up to speed on two or three mechanisms. I don't really see that as a barrier. I don't think you have to have one and only one mechanism.

So I don't see that being, I think if you were to have a mechanism like the contract buy out option that would focus on existing and an option like Dan's that focused on new, I don't see a difficulty there or a problem for developing a sustainable market.

Couple things I'd like to come back to. I definitely agree with Nancy and Bob's view that we need to educate because clearly consumers do need to be educated, and I think there is an appropriate and desirable role for the state generally to help in that process of educating consumers about what's happening. And I think the certification process will talk about tomorrow it's important for this Commission to make sure the consumers really are getting what they think and what they're being told they're

getting. I think those are excellent.

I guess I think that the timing, I don't think we either have as much time, we don't have the whole transition to prepare, and I don't think we need the whole transition to prepare. I think the transition is the time that we need to be done, not the time that we need to start at the end of it.

Because as I mentioned earlier, this really is a critical window to get this market built. I'm very uncomfortable about building, waiting until five years from now and then starting to build the market. I think that's going to be very much, especially if support is going to be ending in 2002, you want that market to be existing to the point where it has a track record and a history that people can look back on and be comfortable jumping into. And if your first deal starts at that time, you're simply not going to have that.

You know, in Massachusetts, Jody London with Working Assets who said she wasn't going to talk today, I'll say what she told me anyway was that they're in the Massachusetts pilot. They had a month to put together a program. They're out marketing, and a month later a marketing and apparently, you know, finding customers eager to sign up.

So the industry can move as quickly as it needs to keep up. And so I don't think we need a four-year process. And the experience we've had so far and we're going to be trying to build in the near term is the earliest the consumer's very much ready to go on January 1, '98, I think we could, if we had the rules set now, we could have all the customers that we need that essentially we can afford to bring into the direct access market.

PRESIDING COMMISSIONER MOORE: You know, there's been a lot of discussion in this room and I know privately to each one of the Commissioners talking about the ability of the various industrial segments to do their own allocation, to build their own allocation systems. I'm taking off a little bit on what Nancy was saying earlier. And I'd like to get your opinions, if you can, about what kind of an allocation system or sub-allocation system you think might emerge if we went that way.

If we did the major distributional cut and we basically said, for argument, let's say we broke it into four big pieces and we proportionately allocated, not equally but on some basis that we decided here, the money out, and it's, okay, now come back to us and bring us an allocation mechanism for each one of these sub-units, would the allocation mechanisms in the end be

necessarily different? Or would one be market driven, the other one be driven by efficiency, the other one be driven by some sort of cost criteria? What's your opinion on that?

Why don't I just start and we'll move down the table. Bob, we'll start with you.

MR. JUDD: I think they would differ somewhat, but I don't think it would be a huge laundry list. I think there are mechanisms that within technologies work. I think there are a limited number of mechanisms that are likely to be put forward by each technology. If you made the rough cut and said give us some idea of how you think you might allocate this.

In the case of the biomass industry itself, it's pretty straight forward. Because we're all existing plants, the likelihood of a new plant is remote during this time period. The opportunity for new plants should be left open because Staff here, as well as others, have looked at ethanol plants, and Mike Theroux has some ideas that came up.

But to us it really is, in large part, a cash flow problem to keep the existing facilities operating in order to generate and capture the benefits. The wind energy industry has other issues because they've got the repowering issue that we

don’t.

So my guess is if you ask why, and sent the four groups home and said come back and give us a list of your mechanisms, you’d find quite a fair amount of commonality.

Before I pass the mike, may I suggest one thing that you might want to come back to. There is sort of a glib representation of SO4 contract buy outs as if it’s a snap of the finger issue. There are a number of people in the audience who are holders of SO4 contracts, and you might at some point, if not today, tomorrow, try to get a little more sense of what would be the incentives for people to leave their contracts. Or the barriers for them to leave their contracts. I think it’s a very germane issue.

PRESIDING COMMISSIONER MOORE: Well, we might ask you guys to opine on that same thing, too. Steve.

MR. KELLY: First, just following up to what Bob had indicated I think you’ll find some commonalities. There may be some nuances if you left it up to each technology type. But I think more fundamentally is you’ll probably find that you may well quite easily and unobtrusively obtain the objectives of AB 1840 on the split.

Because as I think you can pull out of some of the discussion, there is some technologies that are primarily interested in maintaining existing. And there are some technologies that may be more interested in the new. And individually it's difficult to do the split, but if you collectively look at the whole, you probably can attain a 40/40 split and with something, the 20, being handled maybe for a marketing program and some of the other technologies or something.

So I think there's an opportunity there if you'd look at it from a bigger perspective about allowing the flexibility for the technologies to determine the best method for their individual industry to position itself and also attain the goals of AB 1890.

PRESIDING COMMISSIONER MOORE: What do you think the incentives are to buy out the SO4 contracts?

MR. KELLY: It depends on the operating characteristics of each project. But one incentive would be that if the green marketing program is successful as I and others think that it may be, the potential for deriving significant revenues out of the market are there. It may not pertain to everybody because all the contracts are different, and there are no two that are the same, but for some projects it may be beneficial to move into that

market and aggressively market their products in that arena and no longer rely on the utilities.

One of the impediments for that, of course, is obviously that there are two signatories to any contract, and in AB 1890 we attempted to put financing in place to facilitate contract buy outs, and the other issue has been the CTC exemption. That it was not included in the law, but which was discussed by the parties going in and was omitted when the final bill was passed.

PRESIDING COMMISSIONER MOORE: Nancy.

MS. RADER: I guess in terms of how our industry or the majority of our industry is thinking about their need is that they need some certainty about their payments over the next few years in order to make major capital repairs and to repower.

So what we're looking at, and I think some of the other existing industries would be looking at, is to use the existing funds to make up the difference between the market price and the living wage during the transition years so that we can have some certainty that we're going to get what we need to repair the projects.

And how we're thinking of it is that the adder might vary depending on what market price is. So if the market price is

high, nothing goes through existing projects, and all of our funds designated to our industry would be kicked over to new wind projects.

So that we preserve, shore up the existing before we invest in new, which seems only logical since, you know, it's cheaper to keep something existing going and you might as well do that if market prices are low rather than building something that is even farther from being able to make it.

So that's sort of how we're thinking of it. And I think some of the other industries might do something or might want to do something similar.

As far as the mechanism for spending money for new, we haven't received all the different ideas. And this is the first I've heard of this standard offer four idea, so I'd like to encourage people to give me their ideas written out so that we can think about them.

But in terms of the SO4, it is a very complicated issue. There are obligations to lenders and investors. It's definitely not as easy as snapping the fingers, as Bob suggested, and essentially you're looking at a 20-year certain revenue stream, and there has to be some commensurate benefit with exchanging that

with some four-year stream. And that might be a difficult sell to make to investors.

COMMISSIONER SHARPLESS: If I could ask a question. I think one of the things that the Committee has heard is to try to have some certainty in the process and also to try to make it simple. I'm not sure you can do both of those, certain and simple, but under the scheme that you just were speaking to regarding existing would get the money if their prices were above the market price, and it would go to the new if it was below the market price. What period of time would we be looking at, and how would that be administered, and would that not be micro managing and kind of complicated? Who would do it?

MS. RADER: I think we're looking at it in terms of just the four years. So you do it sort of in real time. If market prices are low, the projects submit their kilowatt hours sold, submit what they were paid, the capacity and energy price, compare that to whatever the living wage or whatever you want to call it is determined and pay an adder difference on a monthly basis. Just sort of an ongoing very simple straight-forward turn in your production and your payment statement and we'll make up the difference between that and the living wage.

Then you roll over any unused funds. If market prices rise and if nobody needs an adder, you roll that over to new, and then allocate that as you would any new funds. But that way we assure the existing projects know that over the next four years they are going to get a living wage, and they can make the repairs and they can do the repowers.

COMMISSIONER SHARPLESS: It would be kind of difficult for the new, though, wouldn't it, because the new would only get money if the existing didn't need it, and so there would be this problem that they would not know what the revenue stream was going to be from time to time.

MS. RADER: The way I would see that working is that if there were in the first year, you know, $20 million left over for new, that 20 million could be bid over, you could sort of, it's been called "lay it down," so that 20 million would be spread out over time. So you would commit that 20 million and pay it out over time so that the winner of that bid would be assured of the revenues over time.

I don't know if I'm explaining that well, but you lay it down. You don't spend 20 million in one year. You would stretch it out and assume the obligation for those funds that year.

Because certainly you have to have certainty for new projects.

COMMISSIONER SHARPLESS: Right. Sounds to me like you've developed this proposal.

MS. RADER: It's what we are thinking would best suit our industry.

COMMISSIONER SHARPLESS: Is this proposal written down somewhere?

MS. RADER: Yes, but we haven't --, we have a meeting with our industry Thursday. We've begun to discuss it. We're doing some spreadsheets to see what it means and how much it would cost to give us that living wage and trying to seek consensus within our industry. So we're not totally set on that, but it's what we are playing with right now. That's what would have most value to us.

PRESIDING COMMISSIONER MOORE: Eric, let me keep going around the table and see if I can get your thoughts.

MR. MILLER: Sure. I think very briefly on the allocation, I guess I think still that the most important thing is to be focused on are we, use that over used phrase these days, we're trying to build a bridge for these projects into a sustainable market, and I think one in which, I do think one in

which consumers are going to be the ones who determine the success of it. And so I don't think I'm not going to go industry by industry, but I think that should be the criteria in each case is are you building that bridge most effectively and are you building a bridge to the best market.

And it may be that in individual technologies there are some differences in the best approach there, and that's something to be considered. But I guess I would suggest that should be the, I think, the criteria is are we building the bridge to the best market for those technologies.

On the buy outs, I spent most of the last six years when I was at Canatek, pretty much in continuous discussions on buying out SO4s. We had a total of, a portfolio of about 500 megawatts of SO4 contracts. And it is a complex and difficult issue. And, in fact, the source of my proposal is exactly because of that.

There have been very very few successful buy outs to date. They tend to take a very long time to negotiate; it's very difficult to get a finance side together; it's very difficult to get the PUC on board. I think to really have a good shot at getting people into the marketplace and out of these contracts we have to create some sort of streamline process because so far it's

just, frankly, not working.

And that is really the origin of this proposal was to do something because those CTC funds are already committed to the project. That's something that's locked in, it's locked in, you know, by legislation; they're committed funds.

And if you take it and turn it into a CTC credit, there's a little financing that needs to go on; but that's already provided for in terms of the bonds in the legislation, and you simply are trading a CTC obligation for a credit. It's still the same kind of money. It's all customer, it's basically customer funds that are getting reallocated a bit. And so I think it's something that we can make something that's a very certain transaction.

That you can make it the contract, you know, turn in your contract, get *X* percent in a CTC credit, boom, you're done. You don't go to the PUC, you don't have a lot of negotiation, you don't have a lot of tests and a lot of other things. You're done. And really streamline that.

And I think the reason for this that I was suggesting is that it is a streamline process. It would provide the certainty that projects would need to be able to make the plans they need to

figure out how to get out into the marketplace.

Also, it looks to us like there is actually substantial, could be very substantial advantages to the project of doing this, of making this transfer that I think both in the near term and the long term it looks to be, could be, a very very attractive option to projects. Both, I think particularly for, obviously, existing projects is what we're talking about, but I think it's a potentially very very attractive option, far more attractive than can be done with a cash buyout approach. Which, as I said, it hasn't, really hasn't worked very well so far.

And in fact there was recently just another denial of one, and so there have even been some experience post 1890 that's continuing to suggest a cash buy out approach not being a very workable one.

PRESIDING COMMISSIONER MOORE: Dan.

MR. KIRSHNER: What I'm reacting to is a proposal that industry by industry they make decisions, not only on mechanisms, and what I think is radical about this proposal is the industry groups would have primary responsibility for deciding on the 60/40 versus 40/60 split, which amount of that money is going where. Whether to new or to existing.

Our analogy is, I mean I'm in my 19th year now of working on a software product called ELFIN, which is used here at the Commission, forecasting, some of us have been here all 19 years. Given the choice between, you know, selling ELFIN I've got for $10,000 or somebody wants to give me $10,000 to build some new module the ELFIN does something new, this is an easy choice. I mean it's just human nature you want to sell what you got. I don't want to do more work.

I just think I don't see how we can protect the public interest while leaving the primary responsibility for that kind of decision to the industries. I mean it's just human nature that the 60/40 is going to come out a certain way.

PRESIDING COMMISSIONER MOORE: Well, I'm not quite sure it was leaving all the decision. I was trying to be careful to divide the decision tree into two major categories. One is where we would allocate proportionately on an industry type, if you will; and then within that type that I'm asking the question would it be appropriate for the industry to report back on a split within the industry itself.

But let me go to an edge of that question, and that is to ask you, back to the definitions, the thing we started this

workshop with, are the definitions of new, what's going to constitute a new or emerging technology likely to be radically different? In other words, does the definition need to be tailored in such a way to be industry or technology specific? Do we need four or six or eight definitions where we've got one now? Are we unnecessarily hamstringing ourselves by having one as opposed to technology specific definitions?

By the way I'm not excluding Staff in this, so Marwan if you get nervous you can pipe in.

MR. MASRI: I'd just like to comment on the previous question if I may. Which is I tend to agree with Dan that first of all I think we need to clarify what split we're talking about. If you make decisions on the allocation of funds, say, by industry, and you say what is the split that's going to result, and how's that going to be determined. Are we talking about split between new and emerging and existing within each industry, or are we talking about how do we split among different projects within existing.

I think the different splits here people may be thinking about in giving you answers depending which split they have in mind.

I think from the Staff point of view and the public interest point of view it is important that a new industry and emerging industry gets adequate funding, because that's where the future in the long-term improvement in the industry is really most useful, and that you can give the industry guidelines within which the split between existing, new and emerging within each industry gets accomplished. Maybe with a floor for each, you know, category.

But I think as far as the projects within existing, how the money gets, you know, divvied up among existing projects probably best left to the industry at that point.

So I just want to add here the point that leaving unconstrained allocation within each industry to these three categories may not even get you the restrictions in the bill that, for example, 40 percent should be new and emerging. But there are ways you can ensure that that happens and not give completely free hand how the funds would be allocated within each industry.

PRESIDING COMMISSIONER MOORE: Other opinion? Nancy, you want to start and we'll kind of come right back around.

MS. RADER: Okay. It's just adding on that I think and just responding to what Dan said we don't assume for a moment that

we don’t have to convince you that what we would propose would be good public policy. So, you know, the idea of the industry carving up the money, you know, is just not going to happen. We have to convince you that what we’re proposing is good public policy.

And I think Dan’s analysis of the wind industry cost is a good reason why you want that data from the industry and not from wherever Dan’s data came from. But that we would provide you with the rationale for why the way we want to allocate funds serves public policy.

Remind me of your other question.

MR. JUDD: Definition of new.

MS. RADER: Definition of new.

PRESIDING COMMISSIONER MOORE: Well, my other question’s really whether or not we need a different definition of new, emerging or existing by technology base.

MS. RADER: I would think you could come up with generic definitions that would go across technologies new. It depends on whether we decide new is just a new project in the ground or if new is a different technology than what is in the ground today, though that might not be an emerging technology.

For example, in the wind business there's, you know, there's turbines that haven't been deployed that aren't maybe don't quite fall in emerging but might be considered new.

PRESIDING COMMISSIONER MOORE: What about a new turbine on an old pole?

MS. RADER: Repower. I think that could go either way. It could be considered existing, if you define it that way, or it could be considered new. I think it's really new. You know, it's new technology.

MR. KELLY: I'd just add that since August when these terms first emerged I haven't heard any reason why there could not be kind of a generic application across all technologies. There's obviously is expected to be a debate between what is new, what is existing and what is emerging, but I haven't heard yet any suggestion that whatever that definition was wouldn't be able to apply across technologies.

PRESIDING COMMISSIONER MOORE: Bob.

MR. JUDD: I've been troubled by the definition of new as well. Because I know what an existing project is, I know what an emerging technology is, but it's this new thing that puzzles me. Is it a new technology? Well, if it's a new technology, that

sounds like an emerging technology. If it's a new project, it's just the next year thermal plant or the next windmill or the next biomass. It's not a new technology.

And I think there's a lot of unresolved confusion about that because I think part of the sense when they talked about new is that it's something different instead of something next. The next windmill that one of AWEA's members builds is going to be an upgraded version of the existing windmill that they have. If we build a biomass plant, if geothermal builds a plant, be very identical to what we have now.

So there's a little uncertainty in there about on this question of new and how to value it. And earlier speakers have made the point that maybe the line between new and existing isn't all that important.

PRESIDING COMMISSIONER MOORE: Well, question.

I'm sorry, go ahead, Jan.

COMMISSIONER SHARPLESS: He just spun it around. If it's not all that important. But it does sound important actually.

And my question was that I did listen to a great deal of the August proceedings, but a lot of it was not in the public ear

shot. It was in a negotiated room with many of you involved. Was there a great deal of discussion about what -- he laughs -- what new and existing would be? I mean were you all knowing that this would be a problem to define it? That there wasn't, in fact, a consensus on what new and existing was? Can we be clear about that? There was, has it just fallen apart since August, or ever since August you've known that there's a problem?

MR. KELLY: Well, as a, one of the scribes in this process, from my perspective the unknown definition was that of emerging. The distinction between new and existing, I believe, was one of project orientation and date specific. And the intent to create the category for new was to ensure that not all the money that was being allocated was going to go to existing projects in the ground. The SO4s and everybody else.

So there was an attempt to create this category of something different so that we got the new megawatts in the ground, so that we would get the new kilowatt hours. And that's why that distinction, that's the kind of basis from which that distinction emerged, and it was kind of project specific. It wasn't technology specific, per se.

And we, at the time, were talking about a date that, you

know, anybody who had a contract as of this date was deemed existing, and if you didn't, you were deemed new; and that was going to facilitate the new development. It was always the definition about emerging which created the quandary in my mind and still does.

PRESIDING COMMISSIONER MOORE: The emerging technology doesn't do us any good until it becomes a project on the ground. I mean therein the distinction between technology and project that we need to keep in mind.

I mean we can sport a lot of technology, but until it emerges as a project that's out there generating kilowatt hours, if you will, we haven't enjoyed any advantage from it. Then it throws it into the other arm of the CEC, which is the RD&D arm. So we need to keep that distinction clear that what we're funding here, what we're trying to facilitate is the development of new production as opposed to interesting new technology that might find its way into new production some day.

So let me, we've had a couple Staff comments, and, Eric, I'll work my way back around to you, and then I think we're going to kind of wrap this up and take it up again tomorrow. So, Marwan.

MR. MASRI: I just wondered, this question may be for Nancy and Eric, about a case with Canatek that where the IRS decided what's new. If you can just shed some light on that.

I understand it had to do with if the refurbished projects, 80 percent or more of it was new, considered new, if you have any information about that, it will be very useful I think.

MR. MILLER: Sure. I could just mention, yeah, that because the paying the half tax credit was for new, as defined in the code, and there was a question about exactly. Because you can, for example, put a new turbine on the top of an existing tower, or new blades, you know, at what point do you call new. And the definition that emerged from the IRS was that it's the, first of all the definition is per turbine. It's not on a project basis. So you start with the physical pad up, and that's where the definition, and 80 percent of the material in that, actually it's 80 percent of the cost of that on a per turbine basis has to be new, newly installed. That's the way the definition works.

And, in fact, you can take the tax credit on a per turbine basis. So if you refurbished, you could refurbish 50 percent of your wind plant and take a hundred percent of the tax credit on the part as long as you installed new equipment, or you

could use existing blades on a new machine as long as the blades were less than 20 percent of the costs.

In practice, a wind turbine, by the time you're down to 20 percent, you've probably got a new wind turbine anyway. And so it essentially means a full replacement is the practical definition.

Let me just mention as another veteran of August, I would just echo Steve's thought exactly. I mean that was my understanding of what we were talking about. And, in fact, for awhile the definition of new and existing was going to be under SO4 contract or not was actually for quite awhile one of the definitions that was out there. And we ended up not having that precision. But that's another example of what people were thinking of. They were definitely thinking in terms of newly constructed projects versus projects which were constructed under previous regulatory regimes.

MR. SCHWENT: If I could just make two points as the principal staff drafter of definitions at this point, with regard to the emerging question.

The emerging definition and its inclusion in the bill, I think comes out of the work that went on with the renewables

working group in the first half of this year trying to develop policy recommendations for the PUC. And emerging technologies was a definition that was added there by, in most part, the solar proponents to delineate technologies in a big “T” sense, if you will, a technology that has not been well established, did not have the benefits that the wind, geothermal and biomass industries had, and solar thermal to a lesser extent, of the tax credits, etcetera, during the 1980's. So the notion was there that emerging technologies were whole large technology categories.

Now, on the question of new, some of the feedback that I’ve gotten previous on the definitions, there’s an argument there, yes, about what do you need by new? Is it just physically it’s a new plant? But as it’s been alluded to today, that may be a plant that’s using five-year old or ten-year old designs.

And there is a policy issue I think to be considered here which is if a five- or ten-year old design is not cost effective today because that existing plant needs to be subsidized in order to be able to stay in business, does it make sense from a public policy standpoint to use some of this money to finance new plants if they are using old technology? Or, should new mean that even though it’s a well established technology, like biomass,

geothermal or wind, if they receive money as a new plant that there should be some basis in the design of that plant, some new small “t” technology, some new aspects of its design or operation that would argue that this will help that technology in general reduce its operating cost and become more cost competitive post 2002.

So there is a potential definition of new that says it should include some small “t” new technology in its sum improvements as opposed to just simply being physically new.

PRESIDING COMMISSIONER MOORE: Dan, let’s turn back to you and see if you can get your comments on the range here that we’ve been doing.

MR. KIRSHNER: I think this is an impulse that has to be resisted is that we can always improve things a little bit if we’re just a little bit more careful. I mean the proposal that EDF has put forward is a satisficing [sic] proposal. It doesn’t do the best at everything because we don’t think we can do the best. And I think that’s, you know, I agree with these people very seldom. I try not to make a big deal of it.

[Laughter]

MR. KIRSHNER: But we’re all agreed that we don’t have

time here, and we want a good mechanism, but we can't go the next step and ask for perfection. You know, I'm not benefitting anything Vince is saying, but, you know, our proposal does not take into account of differing externalities of different projects.

And as far as I'm concerned, between the technologies that will be in that envisioned competition, we're close enough. They don't have those big differences. I think biomass has a legitimate argument that they're different, then, again, I don't envision them in that competition for new.

So I think we have to, you know, be a little careful about trying to be perfect.

PRESIDING COMMISSIONER MOORE: Okay. With those inspiring words, let me just say that we're going to look to see you all again tomorrow. It's required attendance, of course, and we're taking names.

We're interested, again, in any of the groups that might be forming up to gather consensus on this. Remember that we're dependent on your guidance and your advice here, but in the end you're looking at the people who have to make this decision. And so it's incumbent on all of us to get as close as we, nothing will

be perfect in the end, but we've got to get as close as we can because it's not in our interest to gut and gore anyone's ox. It's in our interest to come out four years from now and have people be able to backcast and say, yes, they made the most intelligent decision that resulted in the most stable, efficient and competitive industry, small "i", if you will, that is possible to get. So that's what we're after.

We'll convene here again at 10:00 tomorrow and take up the second half of our agenda. We thank you for your attendance.

[Whereupon the meeting adjourned at approximately 4:15 P.M.]

CERTIFICATE OF REPORTER

I, **A. FLYNN**, a duly commissioned Reporter of **CourtScribes**, do hereby declare and certify under penalty of perjury that I have recorded the foregoing proceedings which were held and taken at the **CALIFORNIA ENERGY COMMISSION** in Sacramento, California on the **4th day of November 1996**.

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Dated this **12th day of November 1996** at Foresthill, California.

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A. FLYNN
REPORTER